2003 SOUTH CAROLINA

COMMERCIAL MOTOR VEHICLE TRAFFIC COLLISION FACT BOOK

This publication was produced by the South Carolina Department of Public Safety's Office of Highway Safety Statistical Analysis Section, with support from the South Carolina State Transport Police.

South Carolina Department of Public Safety

March, 2005

The South Carolina Department of Public Safety is pleased to present its 2003 South Carolina Commercial Motor Vehicle Traffic Collision Fact Book. This report is an attempt to describe, in one document, some characteristics of commercial motor vehicle crashes in our State. As the reader, you will be able to compare general crash characteristics over a six year period and within one year.

One mission of the SCDPS is to reduce deaths, injuries and economic losses from commercial motor vehicle crashes. Fortunately, much progress has been made in reducing the number of deaths and serious injuries on our highways. In 2003, fatalities were reduced by 14.3 percent and non-fatal injuries declined by 1.6 percent. Economic loss is down by 10.0 percent over the previous year.

Information about these crashes, presented in the following tables, helps us better understand the highway safety problem and develop effective solutions. Reducing highway fatalities and injuries requires the continued and combined efforts of our state, local, and federal partners -- all working towards this common goal. For this reason, we continue to rely on the collection and coding of crash data that will assist us in our continuing effort to make our highways safer.

I would like to express my sincere appreciation for the hard work and dedication of those people responsible for helping to make our crash data files timely and accurate. Special recognition is extended to staff of the Highway Safety Office who assist in compiling the data for this book and to the members of the State Transport Police who, in addition to handling the immediate needs of commercial motor vehicle crash victims on the scene, also collect the vital crash information that we need to successfully achieve our mission.

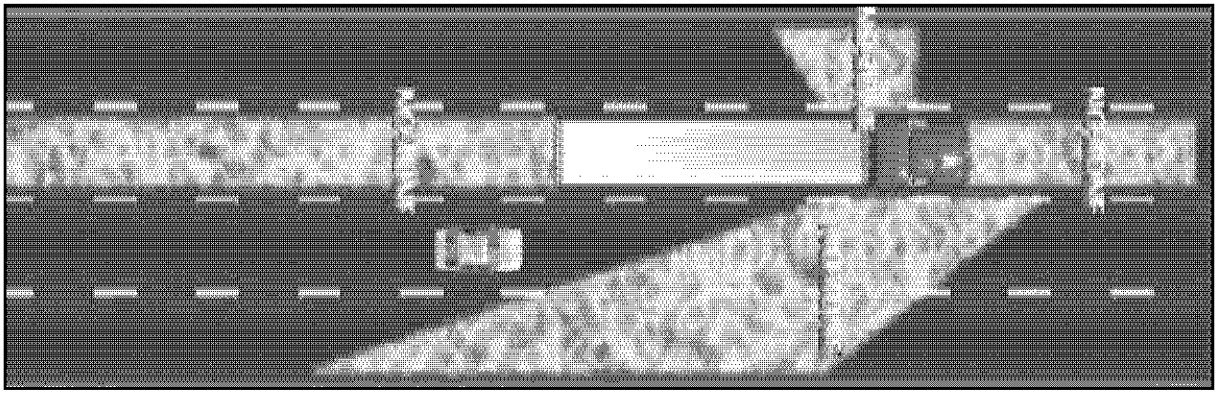
Sincerely,

James K. Schweitzer

James K. Schweitzer
Director

10311 Wilson Blvd. Blythewood, SC – US Mail: P.O. Box 1993 Blythewood, SC 29016

Don't hang out in the
NO-ZONE



AMERICA
NEEDS YOU
BUCKLE UP.

F M C S A
Federal Motor Carrier Safety Administration

SOUTH CAROLINA CMV CRASH STATISTICS CLOCK 2003

1 CMV traffic crash every **2.8** hours

1 injury or fatal crash every **5.5** hours

1 property damage crash every **5.5** hours

1 person killed every **3.6** days

1 person injured every **3.6** hours

CMV TRAFFIC COLLISION QUICK FACTS

	2002	2003	% CHANGE
FATAL COLLISIONS	99	91	-8.1%
INJURY COLLISIONS	1,431	1,488	4.0%
PROPERTY DAMAGE ONLY COLLISIONS	1,583	1,586	0.2%
TOTAL COLLISIONS	3,113	3,165	1.7%
FATALITIES	119	102	-14.3%
NON-FATAL INJURIES	2,509	2,468	-1.6%
ECONOMIC LOSS*	$180,806,000	$162,658,000	-10.0%
TRUCK VEHICLE MILES TRAVELED	4,600,000,000	4,900,000,000	6.5%
ROADWAY MILES	66,195	66,231	0.1%
TRUCK MILEAGE DEATH RATE**	2.6	2.1	-19.2%

*Economic Loss is calculated using the latest information from the National Safety Council, Estimating the Costs of Unintentional Injuries, 2002.
**Mileage Death Rate (MDR) is the number of fatalities in CMV collisions per 100 million Large Truck Vehicle Miles Traveled (VMT). Truck VMT is estimated by South Carolina Department of Transportation (SCDOT).

This is a photo of a truck that hit a parked vehicle and caught on fire in Kershaw county.

TABLE OF CONTENTS

For the purposes of this publication, a collision is defined as a Commercial Motor Vehicle (CMV) collision only if it meets the definition set forth by SAFETYNET. SAFETYNET is a computer software program in which states upload uniform crash data elements of CMV collisions to a national database maintained by the Federal Motor Carrier Safety Administration. The following is the SAFETYNET definition of a CMV collision:

A CMV collision is a reportable collision[1] that involved at least one of the following vehicles:

1. **A vehicle whose Gross Vehicle Weight Rating of the power unit equals 10,001 pounds or greater OR**
2. **A vehicle displaying a hazardous material placard OR**
3. **A passenger vehicle that is designed to carry, or is carrying, 16 or more persons, including the driver.**
4. **A motor vehicle that is designed to carry, or is carrying, 9 or more passengers for compensation.**

AND…

1. **Involves one or more fatal injuries OR**
2. **At least one person is transported for immediate medical care OR**
3. **One or more vehicles (not necessarily the CMV) are towed from the scene due to disabling damage.**

[1] A collision that results in at least $1,000 in total property damage, or results in injury or death, and occurs on a public roadway.

NOTE: As of January 2001, the SAFETYNET criteria for a qualifying vehicle changed to the definitions given above. Therefore, the criteria of a qualifying vehicle differ from those of previous years.

KEY DEFINITIONS

Bus - A motor vehicle designed to transport sixteen (16) or more persons, including the driver.

Collision - Throughout this publication the terms collision and traffic collision are equivalent to the term motor vehicle traffic collision as defined below.

CMV – Commercial Motor Vehicle: A vehicle whose GVWR of the power unit equals 10,001 pounds or greater OR a vehicle displaying a hazardous material placard OR a passenger vehicle that is designed to carry 16 or more persons, including the driver OR a motor vehicle that is designed to carry 9 or more passengers for compensation.

CMV Collisions - A collision involving a CMV in which there are fatal injuries OR persons transported for medical care OR a vehicle is towed from the scene due to disabling damage or is provided assistance.

Disabling Damage – Damage which precludes departure of a motor vehicle from the scene of the collision in its usual manner in daylight after simple repairs.

1. Inclusions: Damage to motor vehicles that could have been driven, but would have been further damaged if so driven.
2. Exclusions:
   i. Damage that can be remedied temporarily at the scene of the collision without special tools or parts.
   ii. Tire disablement without other damage even if no spare tire is available.
   iii. Headlamp or taillight damage.
   iv. Damage to turn signals, horn, or windshield wipers that make them inoperative.

Driver – An occupant who is in actual physical control of a transport vehicle, or for an out-of-control vehicle, an occupant who was in control until control was lost.

Economic Loss - All figures reported are rounded to the nearest $100. Based on the 2002 National Safety Council's Formula which applies with the following factors:

Each fatality	$1,090,000
Each incapacitating injury	$ 52,100
Each non-incapacitating injury	$ 17,200
Each possible injury	$ 9,800
Each *PDO accident	$ 6,200

Fatal Traffic Collision - Any traffic collision that results in the death of at least one occupant or pedestrian as a direct result of injuries sustained in the collision within 30 days of the collision date.

First Harmful Event - The first event in a traffic collision to result in injury or property damage.

Hazardous Material – A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.

HP – Highway Patrol.

Incapacitating Injury - Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities he/she was capable of performing before the injury occurred.

Manner of Collision - The identification in a crash of how the motor vehicle(s) initially came together in a traffic collision.

*PDO = Property Damage Only

KEY DEFINITIONS

Motor Vehicle - Any motorized (mechanically or electrically powered) road vehicle not operated on rails, excluding mopeds, minibikes and other vehicles not subject to motor vehicle licensing regulations. These include: automobiles, trucks, buses, vans and motorcycles.

Most Harmful Event - The event for an individual unit involved in a traffic collision that results in the most severe injury or property damage.

Motor Vehicle Traffic Collision - A transport collision that involves at least one motor vehicle in transport, in which the unstabilized situation originates on a trafficway or at least one harmful event occurs on a trafficway. This definition excludes any collision on a private way.

Non-Incapacitating Injury - Any injury, other than a fatal injury or incapacitating injury, which is evident to observers at the scene of the collision in which the injury occurred.

Occupant - Any person who is part of a transport vehicle (automobile, bicycle, etc.)

Passenger - Any occupant of a vehicle other than its driver.

PDO - An abbreviation for property damage only. A PDO collision is one with some property damage but no injuries or fatalities.

Pedestrian - Any person who is not an occupant as defined above. Includes persons on foot, roller skates, and skateboards.

Possible Injury - Any injury that is reported or claimed which is not a fatal injury, incapacitating injury or non-incapacitating injury.

Primary Contributing Factor - Refers to the primary contributing factor of the traffic collision. This is the presumptive factor that created the collision situation.

Road - The part of a trafficway that includes both the roadway and any shoulder alongside the roadway.

Rural Area - Any area which is not within a defined urban area.

STP- State Transport Police.

Traffic Collision - Used in this publication interchangeably with Motor Vehicle Traffic Collision.

Traffic Unit (Unit) - Any motorized road vehicle (includes vehicles that do and do not qualify as motor vehicles in the above definition), pedestrians, animal drawn vehicle and animals with human riders.

Trafficway - Any land way open to the public as a matter of right or custom for moving persons or property from one place to another.

Unit - Used interchangeably with traffic unit (see definition above).

Source for most definitions: Manual on Classifications of Motor Vehicle Traffic Collisions, Fifth Edition, published by the National Safety Council. The definition for disabling damage comes from the Federal Motor Carrier Safety Regulations Handbook.

Part I - General Information

The following pages contain descriptive statistics regarding collisions involving commercial motor vehicles (CMV's) in South Carolina for the year 2003. This includes applicable information regarding drivers, occupants, vehicles, and any other information necessary to obtain a better assessment of the safety of our roadways.

The number of CMV involved collisions has increased from 3,113 in 2002 to 3,165 in 2003. This equates to a 1.7% increase over this time period. Accompanying these collisions are immense personal and financial losses. While CMV collisions only accounted for 2.9% of the total collisions in South Carolina in 2003, they made up 10.5% of the total fatalities on our roadways. Total fatalities in CMV involved collisions have decreased from 119 in 2002 to 102 in 2003, a 14.3% decrease.

Fatalities are the most severe consequence of motor vehicle collisions, but even in non-fatal collisions, the cost in human suffering can be severe. Injuries sustained in CMV involved collisions have decreased from 2,509 in 2002 to 2,468 in 2003, a 1.6% decrease.

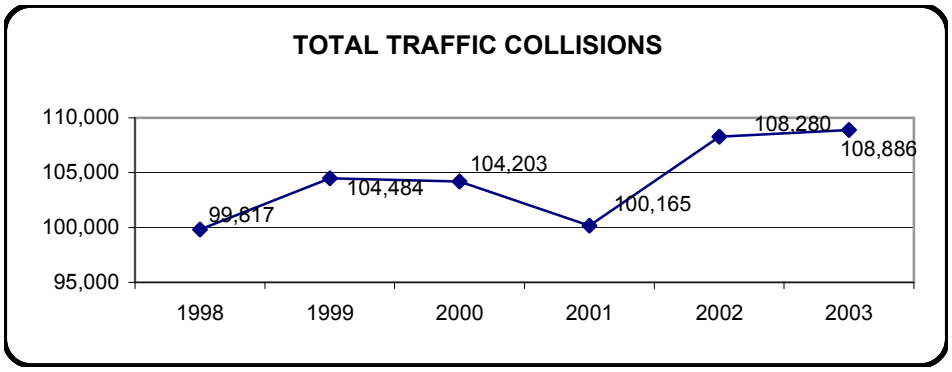
CMV involved collisions are responsible for hundreds of millions of dollars in economic losses to South Carolina each year. Economic losses as estimated in this publication include property damage, medical costs and lost productivity, but do not include intangible costs such as grief and suffering. In 2003, $163 million dollars in estimated losses were incurred in CMV collisions. This was a 10% decrease from 2002. Yet, this also means that CMV collisions made up 7.1% of the total economic loss that occurred on South Carolina roadways in 2003.

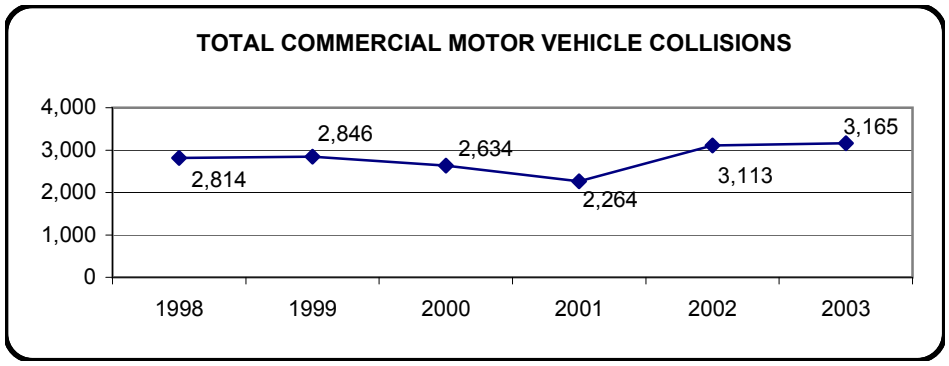
All collision statistics included in this publication are based on data obtained via the Uniform Traffic Collision Report (Form TR-310) and the Supplemental Bus and Truck Collision Report from investigating officers. By law, any collision that results in at least $1,000 in total property damage, or results in injury or death and occurs on a public highway must be reported to the South Carolina Department of Public Safety on the appropriate form. If these collisions occur on private property or are reported on any form other than the TR-310, they are excluded. In order for a vehicle to be defined as a "Commercial Motor Vehicle" it must meet the SAFETYNET threshold explained on page 1. **Only collisions involving at least one CMV are included in this publication, unless otherwise noted.**

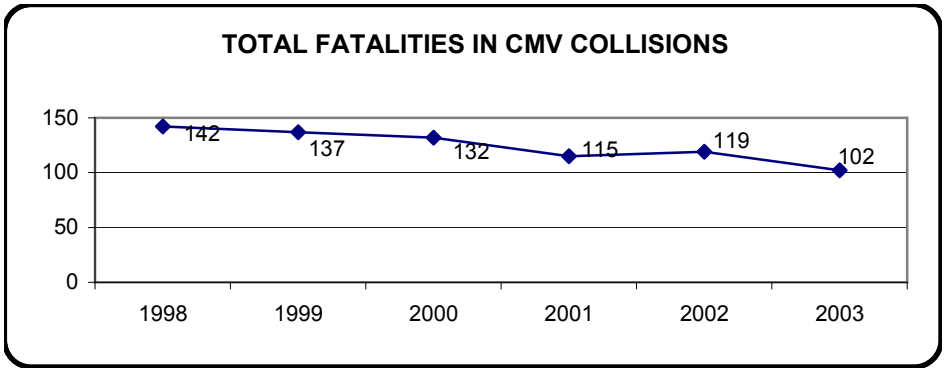
The statistics contained in the South Carolina Commercial Vehicle Traffic Collision Fact Book are based on the latest available information at the time that they were compiled. Due to the complex nature of the data, occasionally new information is received after the publication cut-off date. It is therefore possible that some discrepancies may exist between the data published here and other sources.

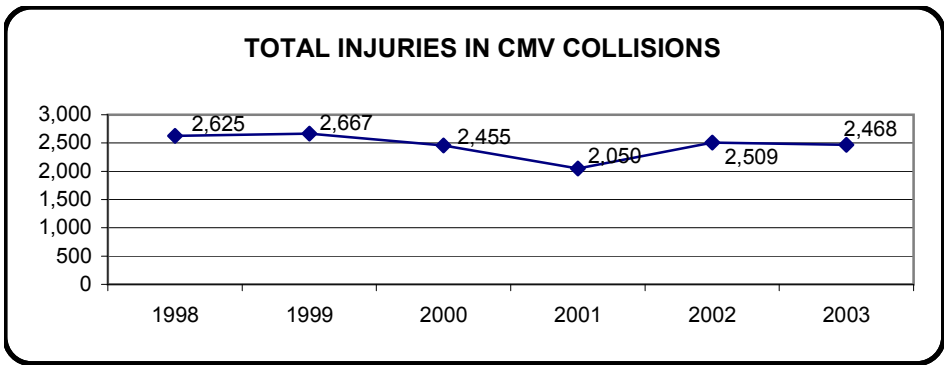
Note: More data is being captured due to edit checks implemented in the data entry process in 2002.

TRAFFIC TRENDS 1998 - 2003

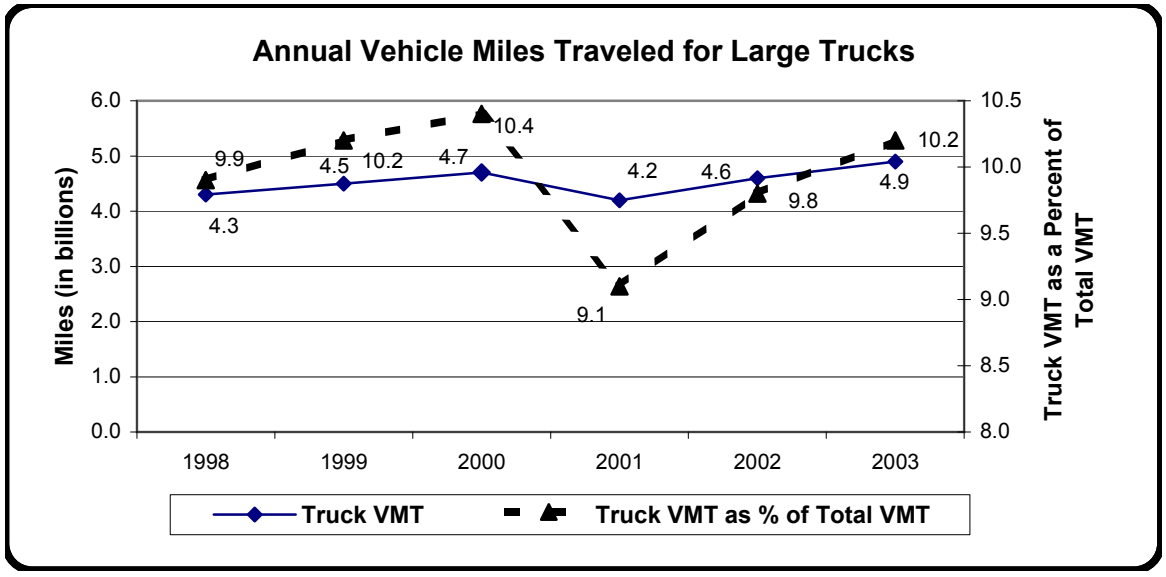




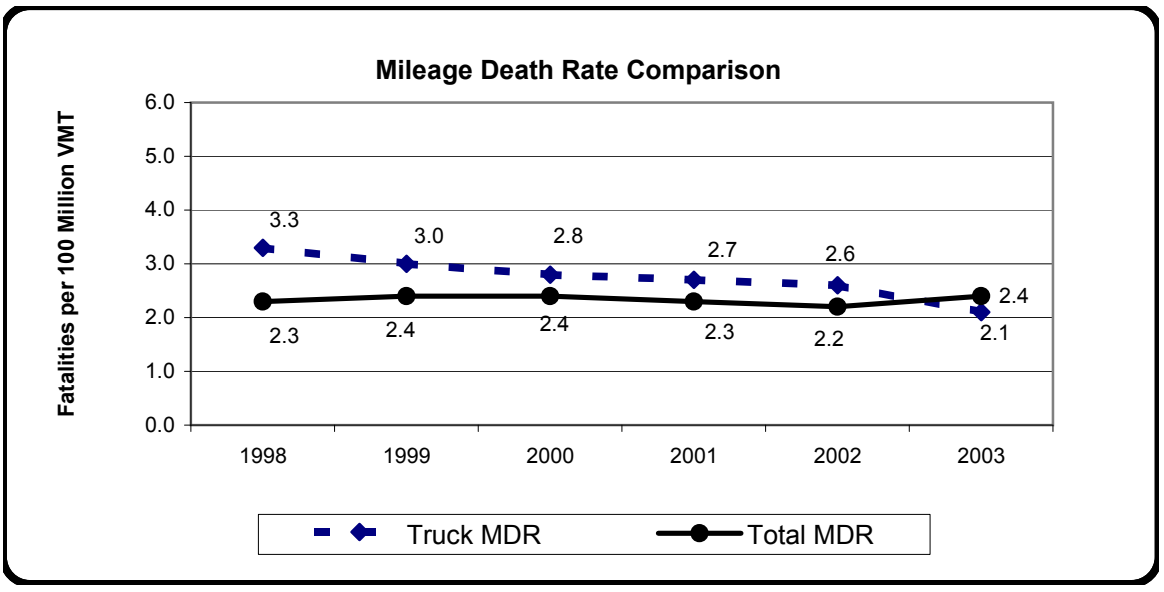




VEHICLE MILES TRAVELED (VMT)

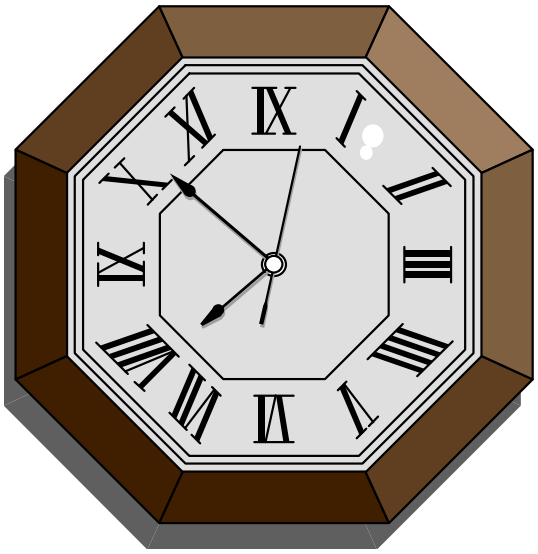


Mileage Death Rate (MDR) is the number of fatalities per 100 million Vehicle Mile Traveled (VMT) "Total MDR" is the MDR for all motor vehicles. "Truck MDR" is the MDR for trucks. Truck Vehicle Miles Traveled (VMT) is estimated by the South Carolina Department of Transportation.* Truck MDR is computed using fatalities in CMV collisions and VMT for trucks.



* Source: South Carolina Department of Transportation estimates Truck VMT.

SOUTH CAROLINA CMV ECONOMIC LOSS STATISTICAL CLOCK 2003



TOTAL ECONOMIC LOSS
$162,658,000

FATALITIES
$111,180,000

INCAPACITATING INJURY
$15,369,500

POSSIBLE INJURY
$14,700,000

PROPERTY DAMAGE ONLY
$9,833,200

NON-INCAPACITATING INJURY
$11,575,600

A loss of $211.53 per minute

A loss of $18.70 per minute

A loss of $29.24 per minute

A loss of $22.02 per minute

A loss of $27.97 per minute

PRIMARY CONTRIBUTING FACTOR

(Pages 8, 9)

Some action (or inaction) by one or more of the drivers was cited as the Primary Contributing Factor in 2,883 of the 3,165 reported CMV traffic collisions in 2003. This accounted for 91% of all primary contributing factors of crashes. "Too fast for conditions" was the greatest of these, accounting for 30.8% of collisions. Vehicle factors accounted for the next largest category of collision causes with 156 or 4.9% of the total. "Tires/Wheels", "Brakes", and "Other" were the contributing factors in which most of the collisions in this category were attributed to. CMV's seem to have a greater propensity to have vehicle malfunctions as collision factors than do passenger vehicles. For fatal collisions in 2003, some type of driver error was considered the probable cause in 85 of the 91 collisions, accounting for 93.4% of all collisions in which someone was killed. This percentage is higher than the percentage for all South Carolina fatal traffic collisions (89.3% driver error).

When dealing with these collisions, it becomes necessary to know which vehicle caused the collision. In two vehicle collisions between a CMV and a Non-CMV, the Non-CMV driver was cited as the only contributor to the crashes in 1,091 of 2,115 collisions, or 52% of the time. The CMV driver was cited as the only contributor in 871 of the 2,115 collisions, or 41% of the time. Non-CMV's were the only contributor in 68% of all fatal crashes and 49.7% of injury collisions. CMV's were the only contributor in 29% of fatal collisions and 43.6% of injury collisions.

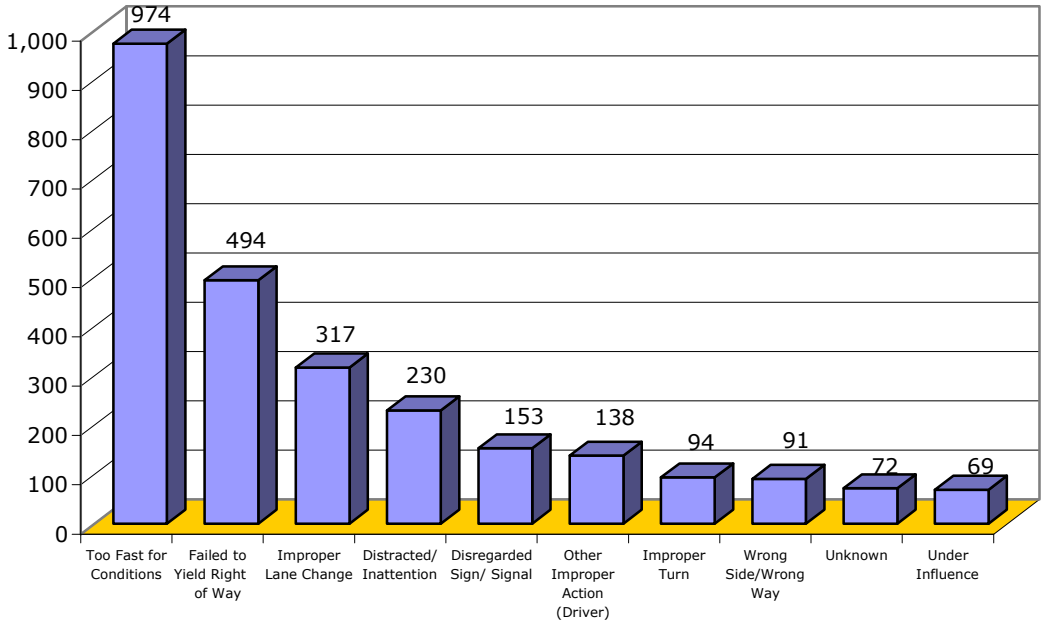
FIRST HARMFUL EVENT

(Pages 10, 11)

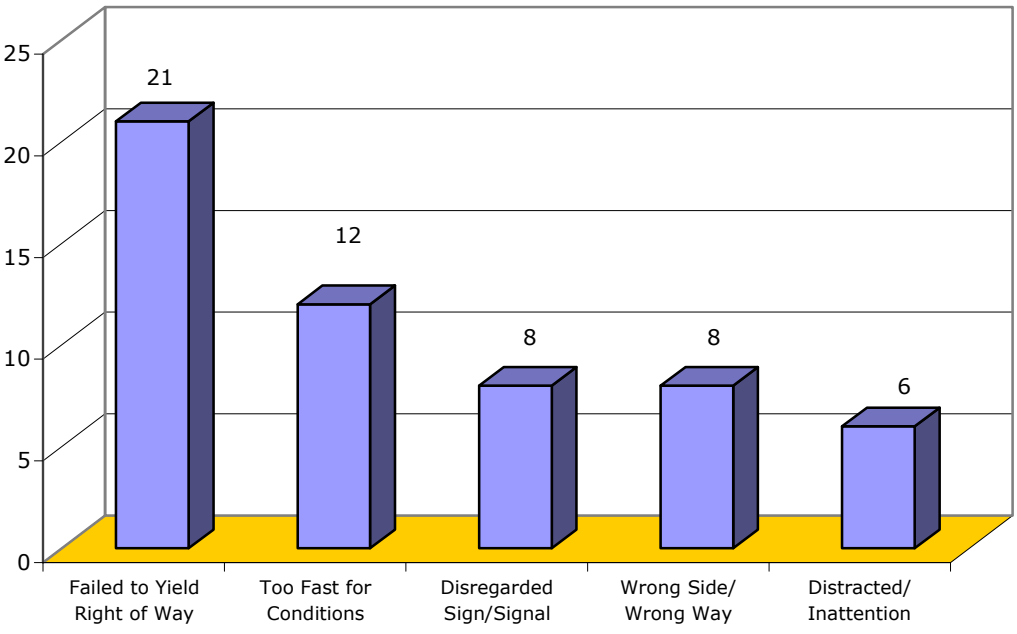
The first harmful event (FHE) in a traffic collision is defined by the National Safety Council as the first occurrence of injury or damage in a collision. In 2003, the FHE in 2,151 of the 3,165 reported CMV traffic collisions (68%) involved some type of collision where the FHE was a collision with a motor vehicle in transport. The second most common FHE was "Overturn" accounting for 218 of 3,165 crashes, or 6.9% of the total. The third FHE was a collision with a stopped vehicle with 177 collisions (5.6%). Combined, these three accounted for more than 80% of all reported CMV collisions.

Collisions with a motor vehicle in transport (72.5%) and collisions with a pedestrian (5.5%) were the top two FHE's in fatal crashes. Overturns/rollovers were the third highest FHE in fatal crashes (4.4%), followed by collisions with a stopped vehicle (3.3%) and collisions with a tree (2%).

TOP TEN PRIMARY CONTRIBUTING FACTORS FOR ALL CMV COLLISIONS



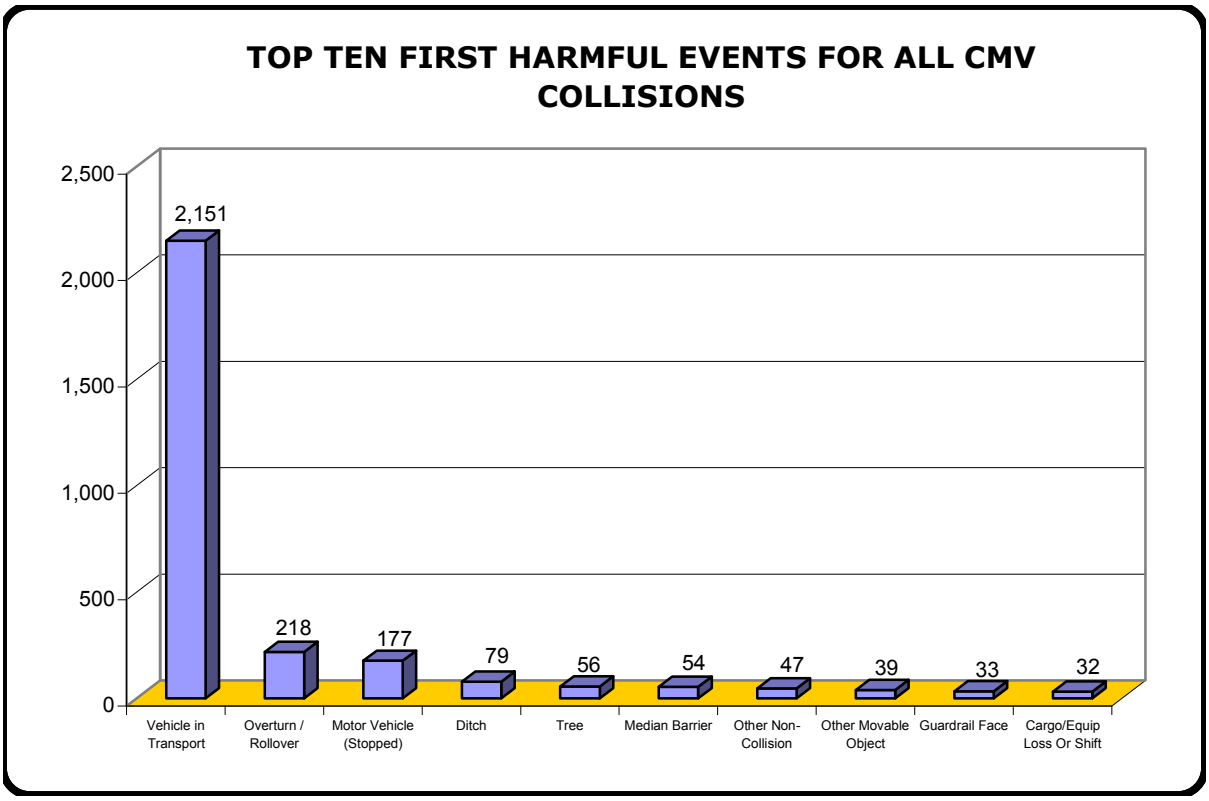
TOP FIVE PRIMARY CONTRIBUTING FACTORS FOR FATAL CMV COLLISIONS

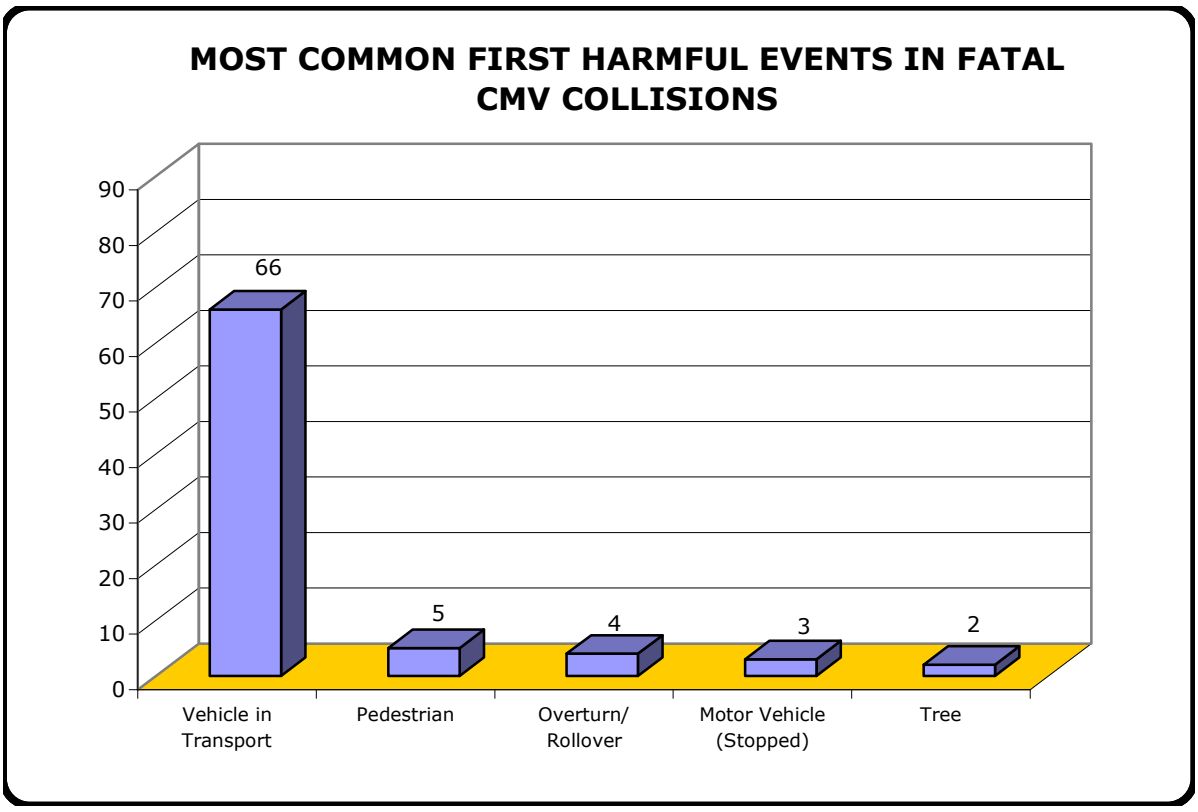


TRAFFIC COLLISIONS BY PRIMARY CONTRIBUTING FACTORS

PRIMARY CONTRIBUTING FACTORS	COLLISION TYPE				PERSONS	
	Fatal	Injury	PDO*	Total	Killed	Injured
DRIVER FACTORS						
Disregarded Signs/Signals	8	101	44	153	9	184
Distracted/Inattention	6	109	115	230	7	173
Too Fast for Conditions	12	458	504	974	13	747
Exceeded Speed Limit	0	8	6	14	0	9
Failed to Yield Right-of-Way	21	266	207	494	25	499
Ran Off Road	4	15	19	38	4	37
Fatiqued/Asleep	5	31	15	51	5	50
Followed Too Closely	1	42	24	67	1	75
Improper Turn	0	38	56	94	0	54
Medical Related	1	14	7	22	1	18
Aggressive Driving	2	6	7	15	3	19
Over-correcting/Over-steering	0	6	9	15	0	7
Swerving to Avoiding Object	0	8	13	21	0	8
Wrong Side or Wrong Way	8	42	41	91	9	57
Under the Influence	4	40	25	69	4	66
Improper Lane Usage/Change	4	117	196	317	5	179
Vision Obscured (within unit)	0	3	4	7	0	4
Cell Phone	0	1	0	1	0	1
Other Improper Action (Driver)	5	58	75	138	5	89
Unknown	4	33	35	72	5	44
SUBTOTAL	**85**	**1,396**	**1,402**	**2,883**	**96**	**2,320**
ROADWAY FACTORS						
Debris	0	4	8	12	0	10
Non-Highway Work	0	0	0	0	0	0
Obstruction In Road	0	3	8	11	0	5
Road Surface Condition (i.e., Wet)	0	3	7	10	0	3
Rut, Hole, Bump	0	0	1	1	0	0
Shoulders (None, Low, Soft, High)	0	1	5	6	0	1
Traffic Control Device (i.e., Missing)	0	0	1	1	0	0
Work Zone (Constr./Maint./Utility)	0	1	3	4	0	1
Worn Travel-Polished Surface	0	0	0	0	0	0
Curve in Roadway	0	0	0	0	0	0
Other	0	4	5	9	0	8
Unknown	0	0	0	0	0	0
SUBTOTAL	**0**	**16**	**38**	**54**	**0**	**28**
NON-MOTORIST FACTORS						
Inattentive	0	1	1	2	0	1
Lying and/or Illegally in Roadway	2	3	0	5	2	4
Not Visible (Dark Clothing)	0	0	0	0	0	0
Darting	2	1	0	3	2	1
Wrong Side of Road	0	1	0	1	0	1
Improper Crossing	0	0	0	0	0	0
Failure To Yield Right of Way	0	1	1	2	0	1
Disregarded Sign/Signal	0	1	0	1	0	3
Under Influence	1	0	0	1	1	0
Other	1	3	4	8	1	3
Unknown	0	0	1	1	0	0
SUBTOTAL	**6**	**11**	**7**	**24**	**6**	**14**
ENVIRONMENTAL FACTORS						
Animal in Road	0	5	17	22	0	8
Glare	0	4	1	5	0	9
Obstruction	0	0	1	1	0	0
Weather Condition	0	7	11	18	0	13
Other	0	1	1	2	0	1
Unknown	0	0	0	0	0	0
SUBTOTAL	**0**	**17**	**31**	**48**	**0**	**31**
VEHICLE DEFECT FACTORS						
Brakes	0	14	20	34	0	21
Steering	0	0	5	5	0	0
Power Plant	0	0	4	4	0	0
Tires/Wheel	0	20	40	60	0	34
Lights	0	1	1	2	0	2
Signals	0	0	1	1	0	0
Windows/Shield	0	0	0	0	0	0
Restraint Systems	0	0	1	1	0	0
Truck Coupling	0	1	3	4	0	2
Cargo	0	7	11	18	0	8
Fuel System	0	1	0	1	0	2
Other	0	4	19	23	0	6
Unknown	0	0	3	3	0	0
SUBTOTAL	**0**	**48**	**108**	**156**	**0**	**75**
OTHER CAUSES	0	0	0	0	0	0
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only


TOP TEN FIRST HARMFUL EVENTS FOR ALL CMV COLLISIONS
2,500
2,000
1,500
1,000
500
0
2,151
218
177
79
56
54
47
39
33
32
Vehicle in Transport
Overturn / Rollover
Motor Vehicle (Stopped)
Ditch
Tree
Median Barrier
Other Non-Collision
Other Movable Object
Guardrail Face
Cargo/Equip Loss Or Shift


MOST COMMON FIRST HARMFUL EVENTS IN FATAL CMV COLLISIONS
90
80
70
60
50
40
30
20
10
0
66
5
4
3
2
Vehicle in Transport
Pedestrian
Overturn/ Rollover
Motor Vehicle (Stopped)
Tree

TRAFFIC COLLISIONS BY FIRST HARMFUL EVENT

FIRST HARMFUL EVENT (FHE)	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
NON-COLLISION						
CARGO / EQUIP LOSS OR SHIFT	1	12	19	32	1	15
CROSS MEDIAN / CENTER LINE	2	10	6	18	3	16
DOWNHILL RUNAWAY	0	0	0	0	0	0
EQUIPMENT FAILURE	0	5	13	18	0	8
OVERTURN / ROLLOVER	4	92	122	218	4	118
SPILL (2 WHEEL VEHICLE)	0	2	0	2	0	8
FIRE/EXPLOSION	0	1	1	2	0	1
IMMERSION	0	1	1	2	0	3
JACK-KNIFE	0	8	23	31	0	9
RAN OFF ROAD LEFT	0	2	1	3	0	2
RAN OFF ROAD RIGHT	0	1	2	3	0	2
SEPARATION OF UNITS	0	1	4	5	0	1
OTHER NON-COLLISION	2	15	30	47	2	19
UNKNOWN NON-COLLISION	0	12	16	28	0	18
SUBTOTAL	**9**	**162**	**238**	**409**	**10**	**220**
OBJECT NOT FIXED						
PEDESTRIAN	5	4	0	9	5	5
PEDALCYCLIST	1	3	0	4	1	3
RAILWAY TRAIN	0	2	3	5	0	2
ANIMAL (DEER ONLY)	0	1	6	7	0	2
ANIMAL (ALL OTHERS)	0	0	5	5	0	0
VEHICLE (PARKED)	2	9	12	23	2	14
VEHICLE (STOPPED)	3	86	88	177	4	155
VEHICLE (IN TRANSPORT)	66	1,104	981	2,151	75	1,888
VEHICLE (OTHER ROADWAY)	0	5	0	5	0	8
WORK ZONE MAINT. EQUIPMENT	0	0	2	2	0	0
OTHER OBJECT NON-FIXED	0	9	30	39	0	14
UNKNOWN MOVABLE OBJECTS	0	0	0	0	0	0
SUBTOTAL	**77**	**1,223**	**1,127**	**2,427**	**87**	**2,091**
FIXED OBJECT						
HIGHWAY GUARDRAIL END	0	5	7	12	0	5
HIGHWAY GUARDRAIL FACE	1	9	23	33	1	13
CRASH CUSHION	0	0	0	0	0	0
UTILITY POLE	0	3	7	10	0	3
TREE	2	25	29	56	2	28
HIGHWAY TRAFFIC SIGN POST	0	2	6	8	0	2
OTHER (POST, POLE, SUPPORT, ETC.)	0	2	3	5	0	2
OTHER (WALL, BLDG, TUNNEL, ETC.)	0	0	4	4	0	0
CULVERT	0	2	6	8	0	2
CURBING	0	1	4	5	0	1
MEDIAN BARRIER	0	13	41	54	0	37
FENCE	0	1	6	7	0	1
DITCH	0	26	53	79	0	37
OVERHEAD STRUCT/UNDERPASS	1	2	5	8	1	3
EMBANKMENT	1	5	9	15	1	10
BRIDGE/PIER/ABUTMENT	0	1	1	2	0	5
BRIDGE PARAPET END	0	0	0	0	0	0
BRIDGE RAIL	0	2	4	6	0	4
OTHER FIXED OBJECTS	0	4	12	16	0	4
UNKNOWN FIXED OBJECT	0	0	1	1	0	0
SUBTOTAL	**5**	**103**	**221**	**329**	**5**	**157**
YEAR TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

CMV COLLISIONS WITH OTHER MOTOR VEHICLES

As shown below, 67% of CMV crashes involved two vehicles, a CMV and a non-CMV. 68% of the fatal collisions in commercial motor vehicle collisions were the result of a CMV versus a non-CMV collision. About 10% of fatal collisions in South Carolina involved a commercial motor vehicle. More than 10% of all traffic fatalities resulted from a CMV crash. However, commercial vehicles were involved in only 2.9% of all collisions. Of those drivers who contributed to the cause of a fatal two-vehicle collision, 68% were non-CMV drivers. Nevertheless, non-CMV drivers made up only 52% of contributing drivers in all CMV collisions involving two vehicles.

DRIVERS IN CMV COLLISIONS WHO CONTRIBUTED TO COLLISION

CONTRIBUTED TO COLLISION	COLLISION TYPE					
	FATAL	% FATAL	INJURY	PDO*	TOTAL	% OF TOTAL
CMV	18	29.0	440	413	871	41.2
NON-CMV	42	67.7	501	548	1,091	51.6
BOTH	2	3.2	33	34	69	3.3
NEITHER	0	0.0	35	49	84	4.0
TOTALS	**62**	**100.0**	**1,009**	**1,044**	**2,115**	**100.0**

*Property Damage Only

This table counts only **two-vehicle collisions between a CMV and a Non-CMV .

Part II - Collision Characteristics

There are many characteristics associated with CMV collisions. Patterns in these characteristics can provide insight into the cause of collisions and may ultimately lead to effective countermeasures for reducing the number of collisions that occur and minimizing the severity of those that will still occur. The data provided on the following pages may raise interesting questions for those interested in highway safety. These questions may in turn lead to research, which addresses a particular collision characteristic. Here are some examples of CMV collision characteristics for 2003:

A. Driver

- Males make up the vast majority of CMV drivers in collisions, likely mirroring the population of CMV drivers.
- Female drivers were involved in 41.7% of all traffic collisions in S.C. in 2003, yet they made up 7.2% of CMV drivers involved in collisions with CMV's.

B. Time

- The month of July had the most fatal collisions (11), followed by April and October (10).
- CMV collisions are much more likely to occur during the week (Monday -Friday) as opposed to the weekend. More fatal CMV collisions occurred on Monday (21) and Tuesday (16).
- 78% of all CMV collisions occurred between the hours of 6 am and 6 pm.

C. Location

- More fatal CMV collisions occurred on SC primary routes than any other route category.
- Greenville (263) and Spartanburg (254) had more CMV collisions than any other county. Greenville and Spartanburg tied for having the most fatal collisions (6).

D. Environment

- The vast majority of CMV collisions occurred during the day in clear weather, and on dry, straight, and level roads.

E. Vehicles

- 57% of CMV's involved in collisions consisted of tractors with semi-trailers.
- Less than 2.5% of CMV's involved in all CMV collisions were carrying hazardous materials.

This Mack truck jackknifed. No other vehicles were involved.

This semi hit a car as the car turned into its path. Two passengers in the car died. The driver of the semi sustained minor injuries.

A. The Driver

Numerous decisions are required of drivers in the operation of a commercial motor vehicle. All too often, poor judgement, inattention, carelessness or even deliberate intent on the part of a driver results in a dangerous driving decision, which leads to a traffic collision. The primary contributing factor in over 90% of all reported traffic crashes was driver-related in 2003. Driver violations reported during FY 2002, FY 2003, and FY 2004 (FY is from July 1 through June 30) are as follows:

Summary of Serious Traffic Enforcement Violations

	Violation	FY 2002	FY 2003	FY 2004
1.	Speeding (>10 MPH over Speed Limit)	4,777	3,655	2,643
2.	Failure to Obey Traffic Control Device	385	332	279
3.	Use/Under Influence of Alcohol	138	97	94
4.	Driver Uses/Is in Possession of Drugs	136	110	110
5.	Improper Lane Change	101	74	66
6.	Following Too Closely	94	99	93
7.	Failure to Yield Right of Way	80	39	9
8.	Improper Turns	20	16	11
9.	Improper Passing	5	9	9
10.	Reckless Driving	3	3	0
	Total	**5,739**	**4,434**	**3,314**

Enumerated on the following pages are the numbers of drivers involved in CMV collisions by age and sex. Approximately 90% of CMV drivers involved in total CMV collisions were male; about 98% of CMV drivers involved in fatal CMV collisions were male. Only 7.2% of CMV drivers involved in CMV collisions were females. However, in the non-CMV drivers who were involved in CMV collisions, about 57% were male and 41% were female. Additionally, nearly 59% of the non-CMV drivers involved in fatal CMV collisions were male. About 41% were female (non-CMV drivers involved in fatal CMV collisions).

AGE AND SEX OF CMV DRIVERS INVOLVED IN CMV TRAFFIC COLLISIONS

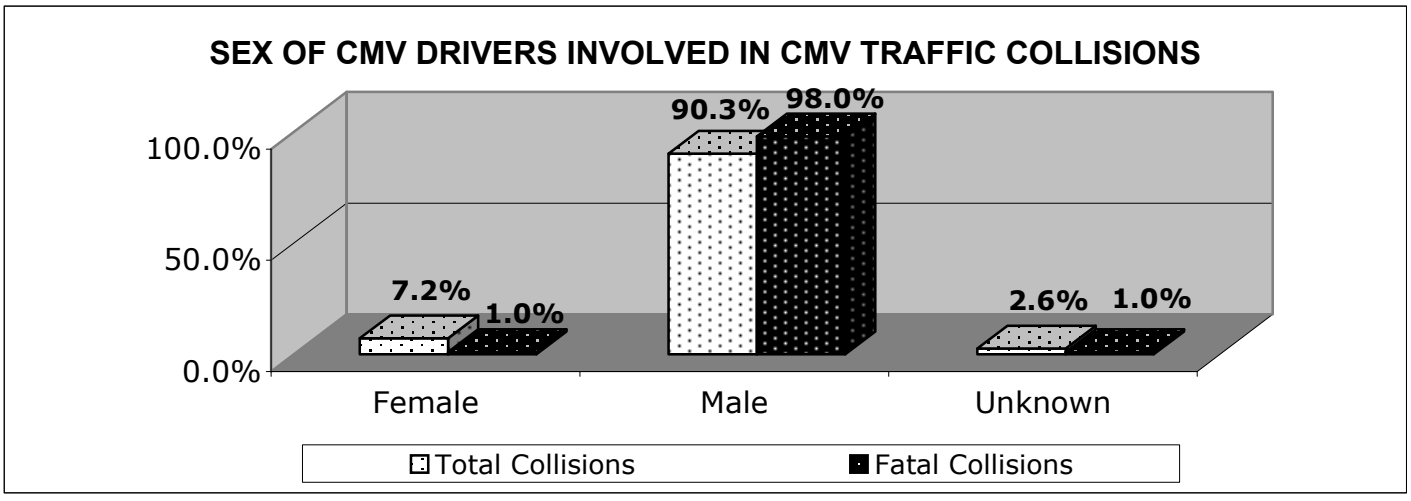
TOTAL COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	1	2	0	3
15 to 24	15	142	0	157
25 to 34	46	625	0	671
35 to 44	74	878	0	952
45 to 54	66	757	0	823
55 to 64	30	436	0	466
65 to 74	4	104	0	108
75 to 84	0	10	0	10
85 & OLDER	0	2	0	2
UNKNOWN	0	14	84	98
TOTALS**	**236**	**2,970**	**84**	**3,290**

FATAL COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	0	0	0
15 to 24	0	2	0	2
25 to 34	0	14	0	14
35 to 44	1	36	0	37
45 to 54	0	21	0	21
55 to 64	0	17	0	17
65 to 74	0	6	0	6
75 to 84	0	1	0	1
85 & OLDER	0	0	0	0
UNKNOWN	0	1	1	2
TOTALS**	**1**	**98**	**1**	**100**

INJURY COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	1	1	0	2
15 to 24	11	65	0	76
25 to 34	24	286	0	310
35 to 44	42	418	0	460
45 to 54	44	350	0	394
55 to 64	21	209	0	230
65 to 74	3	43	0	46
75 to 84	0	3	0	3
85 & OLDER	0	2	0	2
UNKNOWN	0	6	26	32
TOTALS**	**146**	**1,383**	**26**	**1,555**

PROPERTY DAMAGE ONLY COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	1	0	1
15 to 24	4	75	0	79
25 to 34	22	325	0	347
35 to 44	31	424	0	455
45 to 54	22	386	0	408
55 to 64	9	210	0	219
65 to 74	1	55	0	56
75 to 84	0	6	0	6
85 & OLDER	0	0	0	0
UNKNOWN	0	7	57	64
TOTALS**	**89**	**1,489**	**57**	**1,635**

**Includes drivers whose age and sex were not recorded on the report, hit and run collisions for which driver information was not available and also includes parked cars with no drivers.



AGE AND SEX OF NON-CMV DRIVERS INVOLVED IN CMV TRAFFIC COLLISIONS

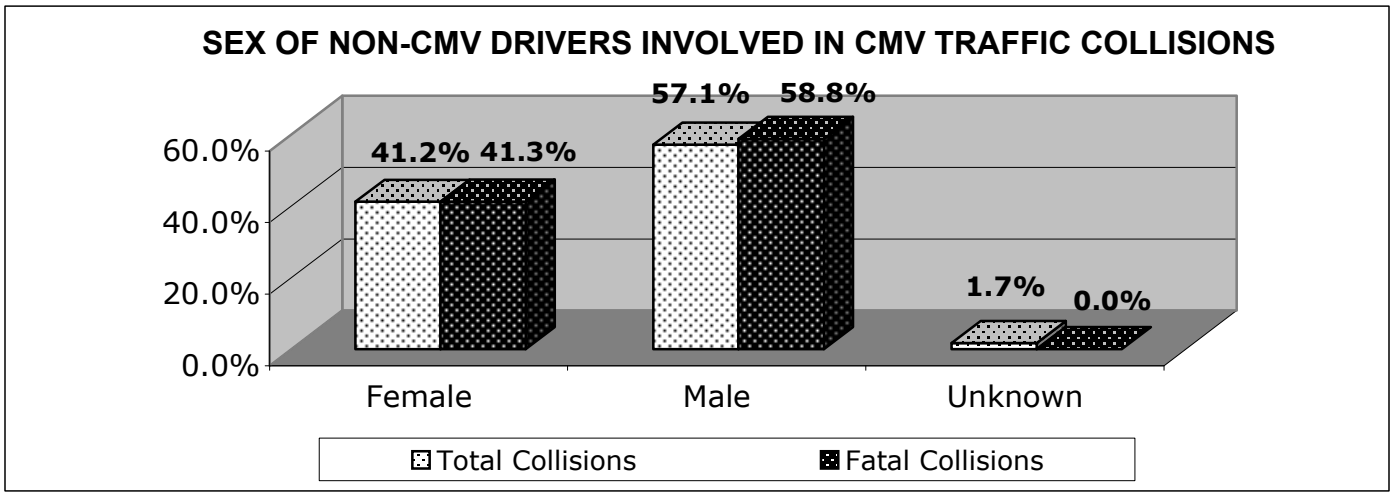
TOTAL COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	1	6	0	7
15 to 24	295	389	0	684
25 to 34	242	314	0	556
35 to 44	224	290	0	514
45 to 54	191	254	0	445
55 to 64	105	171	0	276
65 to 74	66	113	0	179
75 to 84	33	54	0	87
85 & OLDER	3	10	0	13
UNKNOWN	3	12	48	63
TOTALS**	**1,163**	**1,613**	**48**	**2,824**

FATAL COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	0	0	0
15 to 24	7	12	0	19
25 to 34	8	6	0	14
35 to 44	9	8	0	17
45 to 54	3	6	0	9
55 to 64	3	5	0	8
65 to 74	1	5	0	6
75 to 84	2	4	0	6
85 & OLDER	0	0	0	0
UNKNOWN	0	1	0	1
TOTALS**	**33**	**47**	**0**	**80**

INJURY COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	1	2	0	3
15 to 24	161	183	0	344
25 to 34	136	162	0	298
35 to 44	132	143	0	275
45 to 54	116	134	0	250
55 to 64	59	80	0	139
65 to 74	36	57	0	93
75 to 84	13	26	0	39
85 & OLDER	2	7	0	9
UNKNOWN	2	3	13	18
TOTALS**	**658**	**797**	**13**	**1,468**

PROPERTY DAMAGE ONLY COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	4	0	4
15 to 24	127	194	0	321
25 to 34	98	146	0	244
35 to 44	83	139	0	222
45 to 54	72	114	0	186
55 to 64	43	86	0	129
65 to 74	29	51	0	80
75 to 84	18	24	0	42
85 & OLDER	1	3	0	4
UNKNOWN	1	8	35	44
TOTALS**	**472**	**769**	**35**	**1,276**

**Includes drivers whose age and sex were not recorded on the report, hit and run collisions for which driver information was not available and also includes parked cars with no drivers.

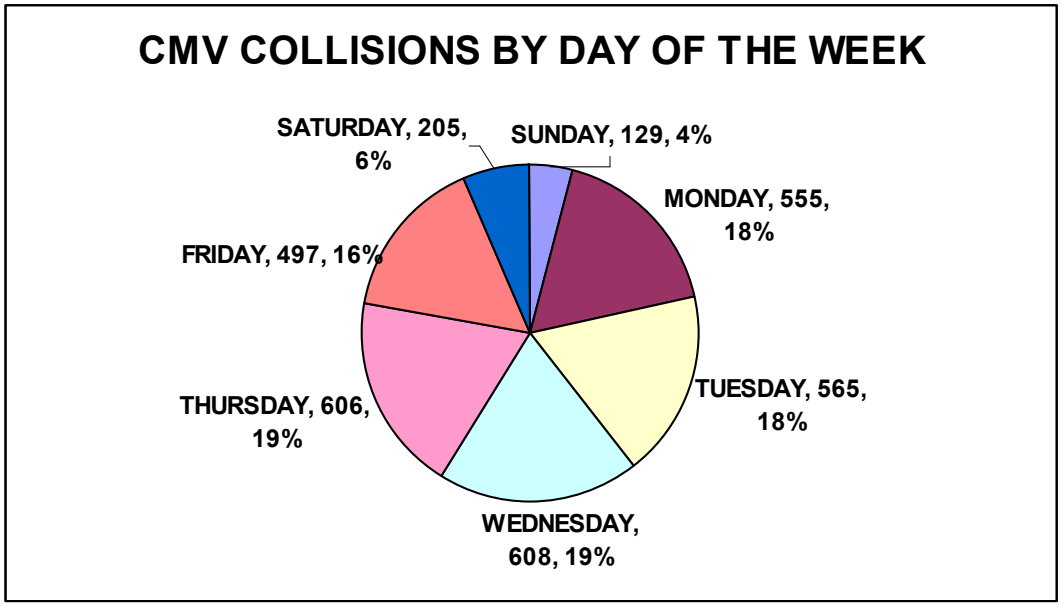


This truck skidded on wet pavement and turned over on top of this bridge, on top of the driver.

B. Time

The frequency of traffic collisions is affected by the settings of the clock and calendar. The concentration of traffic, for example, is heavier at certain times of the day, days of the week and month. Driver attitudes, vision and behavior are influenced by time factors. In addition, weather may be influenced by time of year. On the following pages, statistics are presented which indicate observable time variables. Some of the important observations in the 2003 data are as follows:

- More CMV crashes were reported on Wednesday than any other day of the week. There were 608 collisions during 2003, accounting for more than 19% of the total. The fewest number of CMV traffic collisions were reported on Sundays with 129, or 4%.
- More CMV fatal collisions occurred in the month of July (11) than any other month of the year. The fewest number of CMV fatal collisions occurred within the month of June (2).
- More CMV collisions were reported between the hours of 9:00 AM and 6:00 PM. Fatal collisions occurred more frequently in the daytime hours between 12:00 PM and 6:00 PM. Approximately 34% of all fatal collisions occurred during this six-hour period.

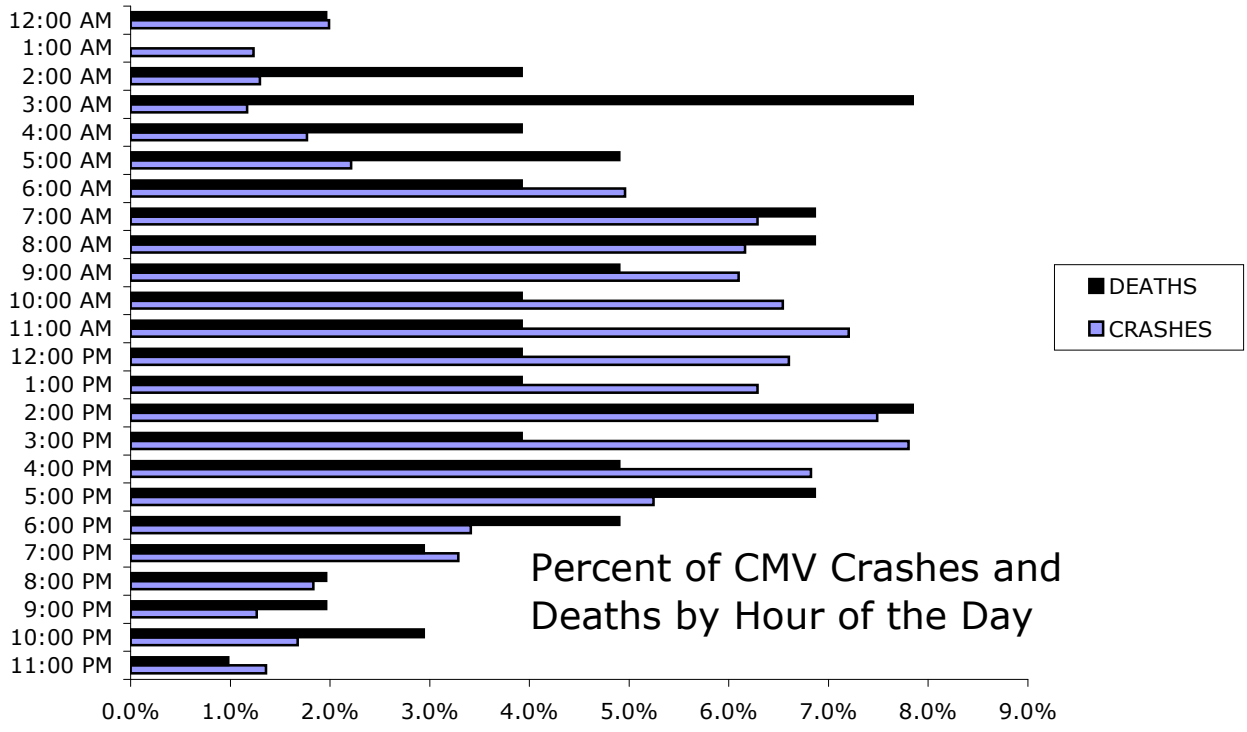


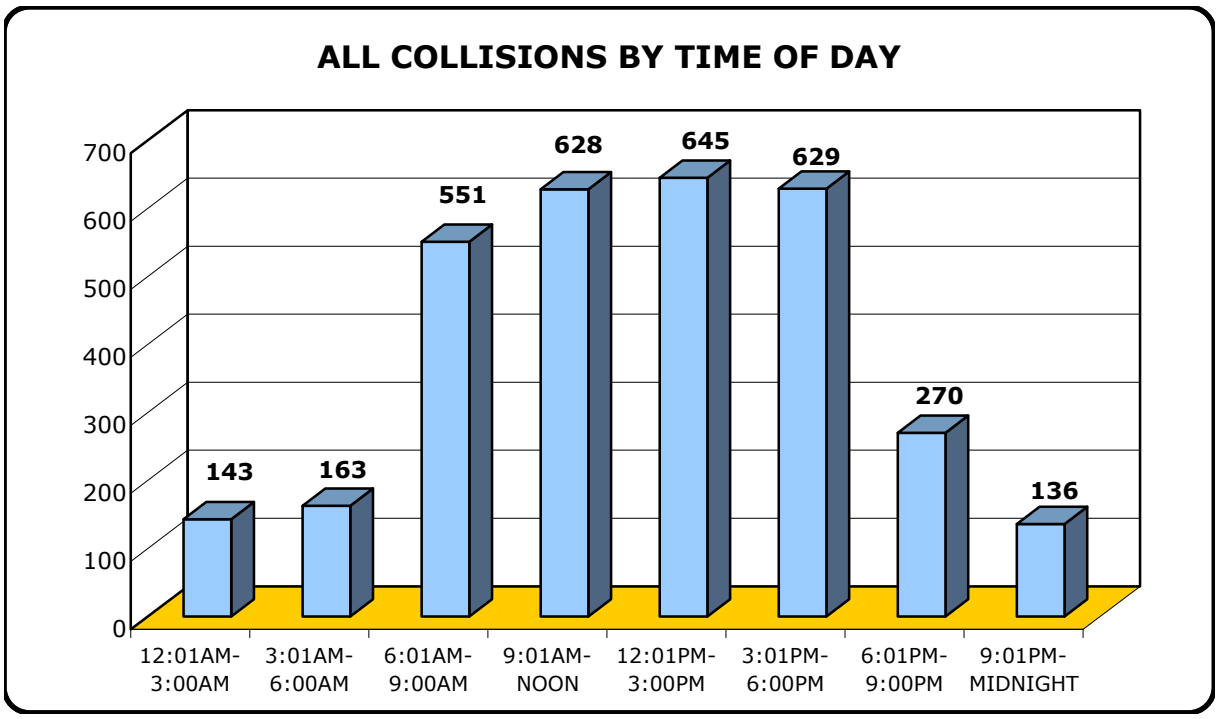
CMV Collisions by Hour of the Day

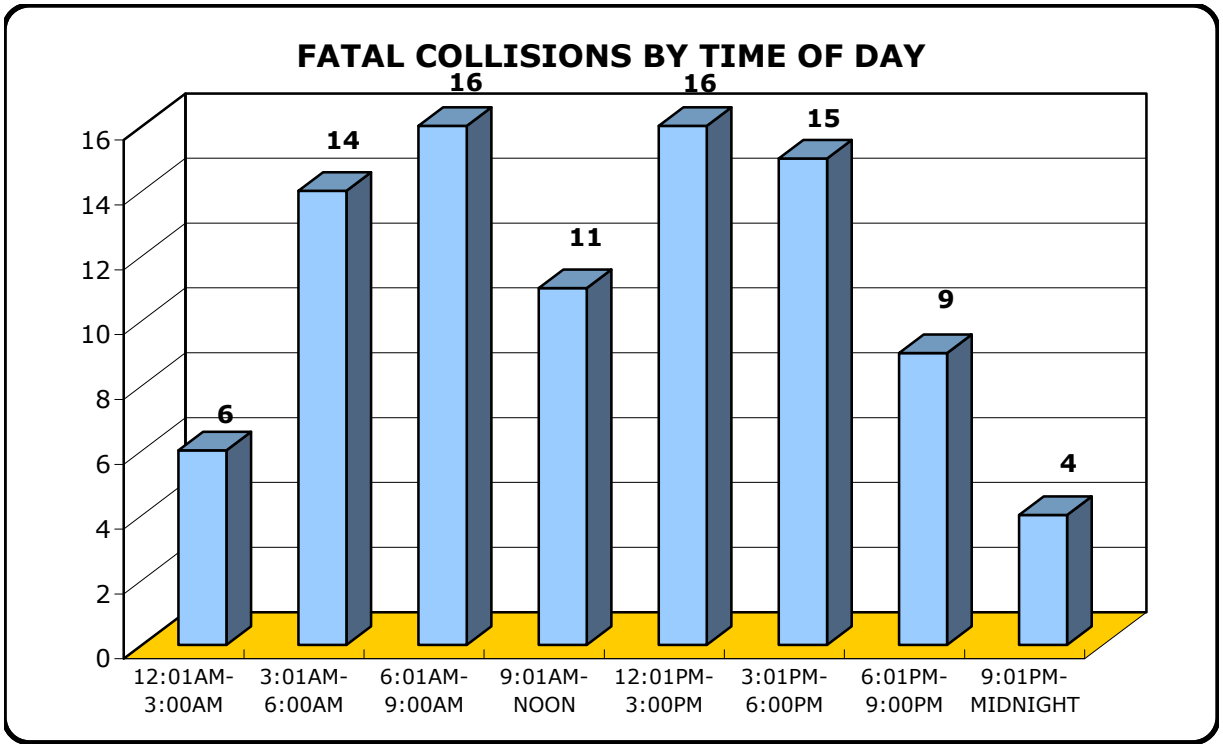
HOUR	CRASHES	DEATHS
12:00 AM	63	2
1:00 AM	39	0
2:00 AM	41	4
3:00 AM	37	8
4:00 AM	56	4
5:00 AM	70	5
6:00 AM	157	4
7:00 AM	199	7
8:00 AM	195	7
9:00 AM	193	5
10:00 AM	207	4
11:00 AM	228	4
12:00 PM	209	4
1:00 PM	199	4
2:00 PM	237	8
3:00 PM	247	4
4:00 PM	216	5
5:00 PM	166	7
6:00 PM	108	5
7:00 PM	104	3
8:00 PM	58	2
9:00 PM	40	2
10:00 PM	53	3
11:00 PM	43	1
TOTAL	**3,165**	**102**

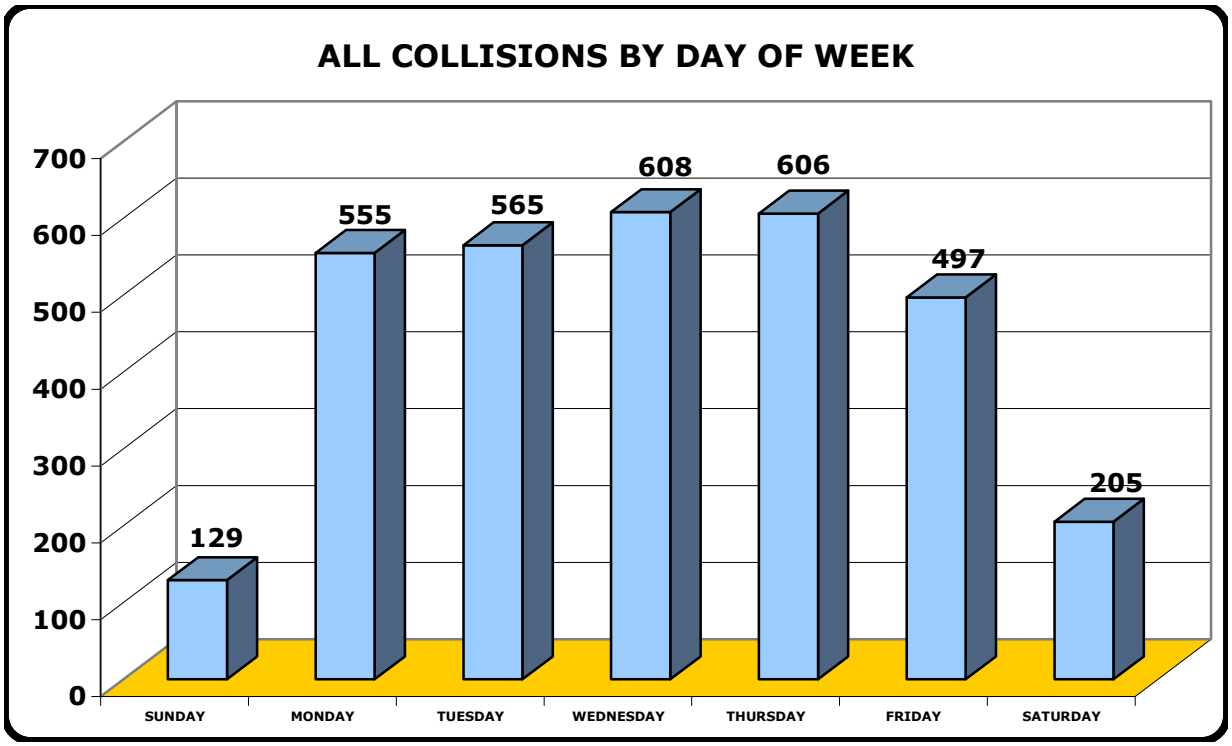
Some hours of the day are more dangerous than others with regard to CMV crashes and deaths. Not surprisingly, commercial vehicle crashes and deaths were higher during peak traffic time. Some hours of the day experience a low percentage of crashes, but they are much more deadly. For example, only 1.2% of CMV crashes in 2003 occurred in the 3:00 AM hour, but 7.8% of all deaths - the highest percentage (tied with 2:00 PM) - occurred then!

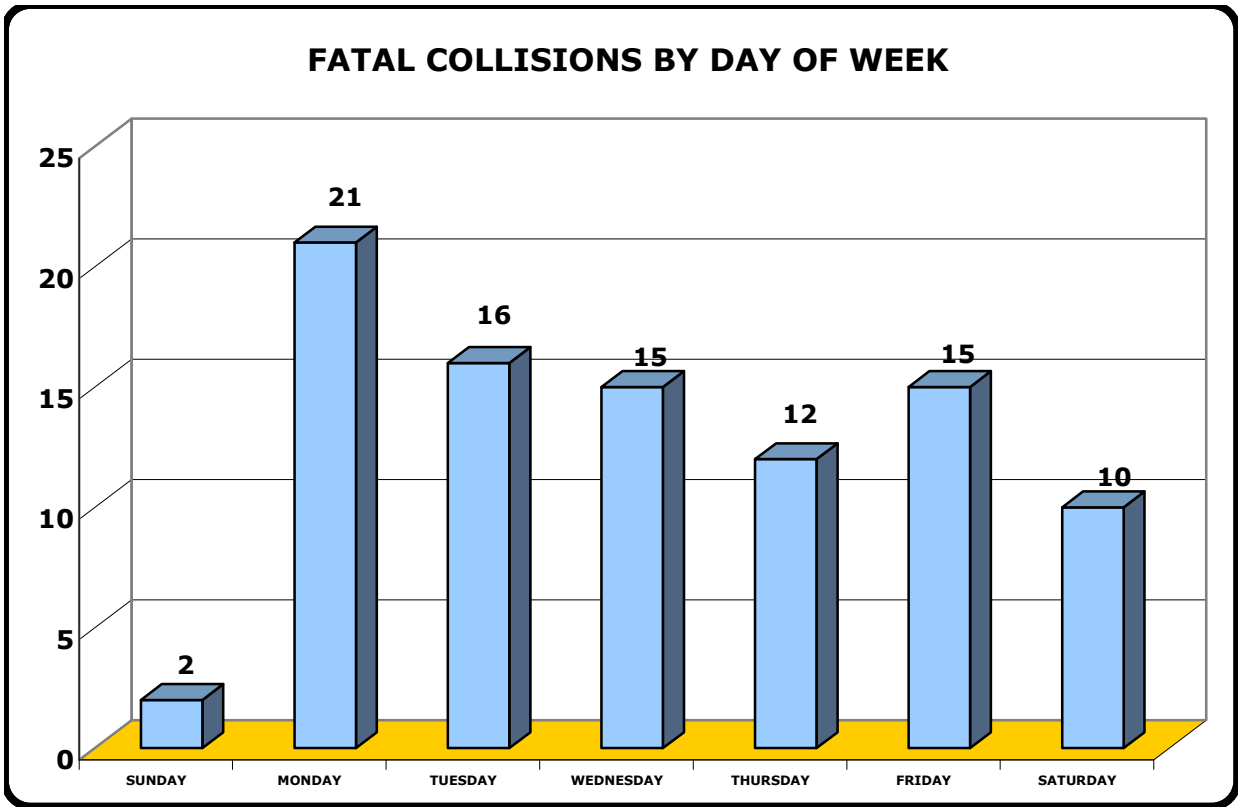
Almost 8% of CMV crashes occurred during the 3:00 PM hour. Only 3% of crashes occurred during the 7:00 PM hour.
The 1:00 AM hour proved to be the least deadliest hour in 2003 for collisions involving CMV's, with 0 deaths recorded for this hour.
Below is a graph of the percent of crashes and deaths by the hours of the day.

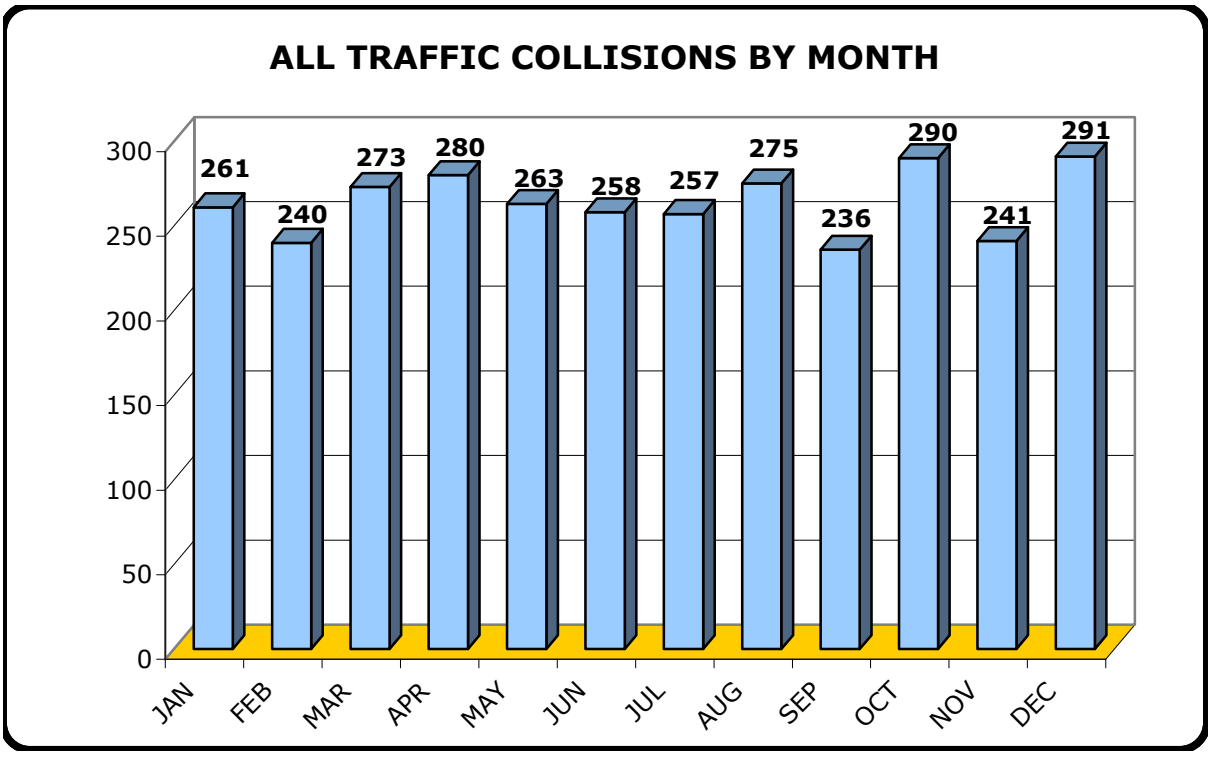


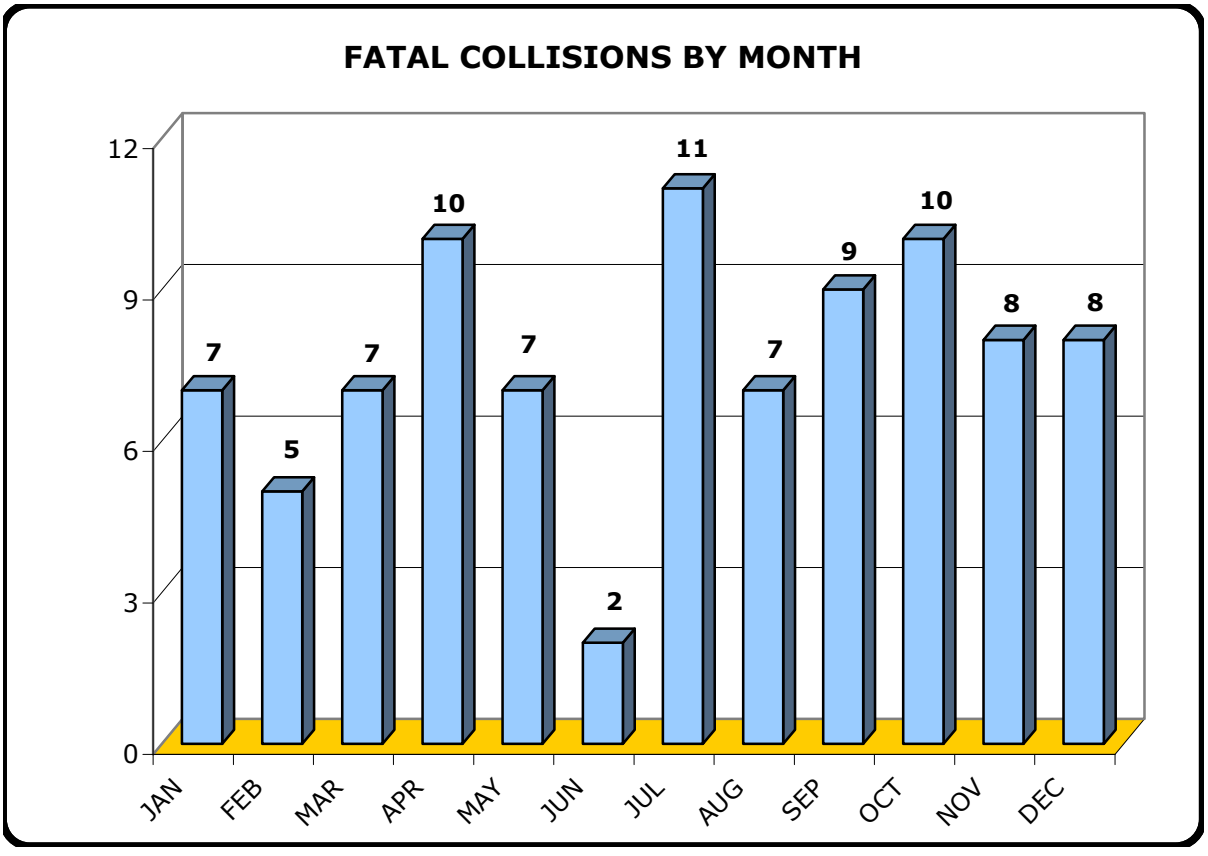

ALL COLLISIONS BY TIME OF DAY
700
600
500
400
300
200
100
0
143
163
551
628
645
629
270
136
12:01AM-3:00AM
3:01AM-6:00AM
6:01AM-9:00AM
9:01AM-NOON
12:01PM-3:00PM
3:01PM-6:00PM
6:01PM-9:00PM
9:01PM-MIDNIGHT


FATAL COLLISIONS BY TIME OF DAY
16
14
12
10
8
6
4
2
0
6
14
16
11
16
15
9
4
12:01AM-3:00AM
3:01AM-6:00AM
6:01AM-9:00AM
9:01AM-NOON
12:01PM-3:00PM
3:01PM-6:00PM
6:01PM-9:00PM
9:01PM-MIDNIGHT


ALL COLLISIONS BY DAY OF WEEK
700
600
500
400
300
200
100
0
129
555
565
608
606
497
205
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY


FATAL COLLISIONS BY DAY OF WEEK
25
20
15
10
5
0
2
21
16
15
12
15
10
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY


ALL TRAFFIC COLLISIONS BY MONTH
300
250
200
150
100
50
0
261
240
273
280
263
258
257
275
236
290
241
291
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC


FATAL COLLISIONS BY MONTH
12
9
6
3
0
7
5
7
10
7
2
11
7
9
10
8
8
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC

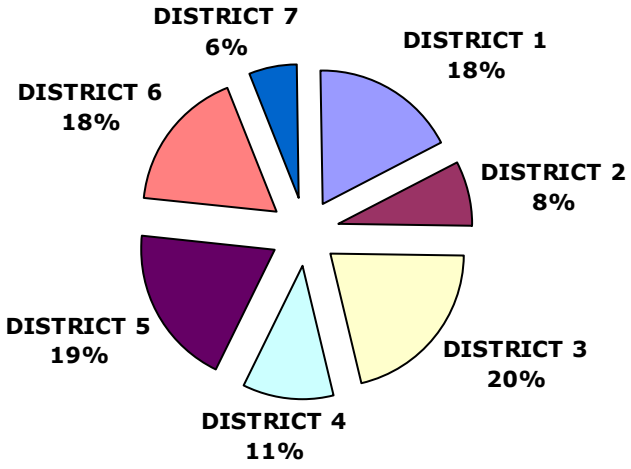
The driver of this truck swerved to miss a deer. He only received minor cuts and scrapes.

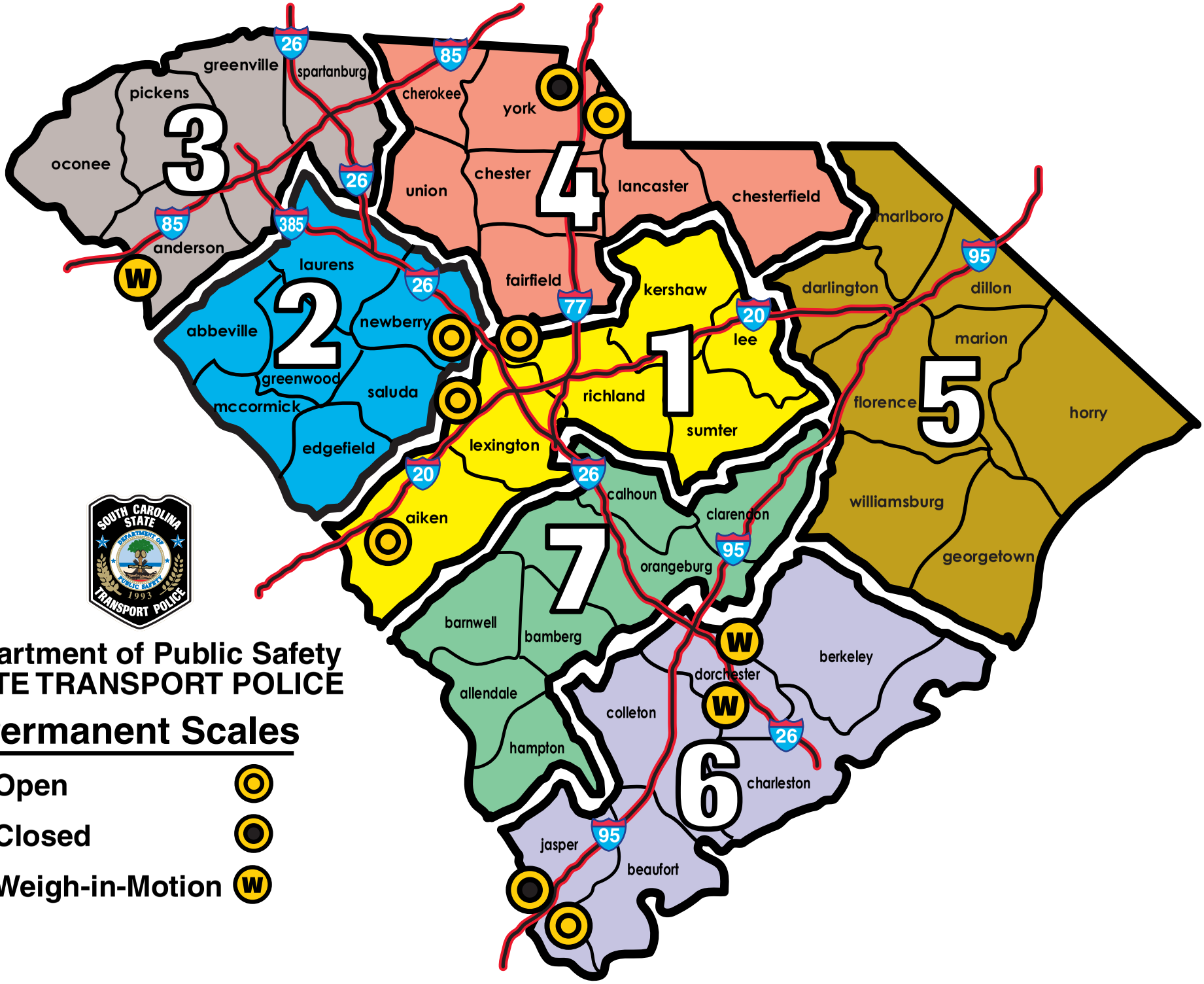
C. Location

South Carolina is a major distribution center for the southern United States. The state is traversed by six interstate highway systems, totaling 809 miles; the state also has 9,442 miles of primary roads and 31,214 miles of secondary roads. A variety of factors influence where traffic collisions, injuries and fatalities occur including the volume of traffic on a particular highway, weather variations and travel patterns. Statistics are presented on the following pages, which indicate observable differences in the occurrence of traffic collisions with relation to various location categories. Some important observations in the data are as follows:

- In 2003, Greenville County had the most CMV traffic collisions (263) and injury collisions (113). Greenville and Spartanburg Counties had the most fatal collisions (6). Spartanburg also had the most fatalities (8).
- Nearly 1 in every 5 fatalities that resulted from a CMV collision occurred in District 3, which includes the counties of Anderson, Greenville, Oconee, Pickens, and Spartanburg. 19% of the injuries from a CMV collision occurred in the coastal area (District 5) of SC.

CMV FATALITIES BY STP DISTRICT





SOUTH CAROLINA STATE DEPARTMENT OF PUBLIC SAFETY 1993 TRANSPORT POLICE

Department of Public Safety
STATE TRANSPORT POLICE

Permanent Scales

Open

Closed

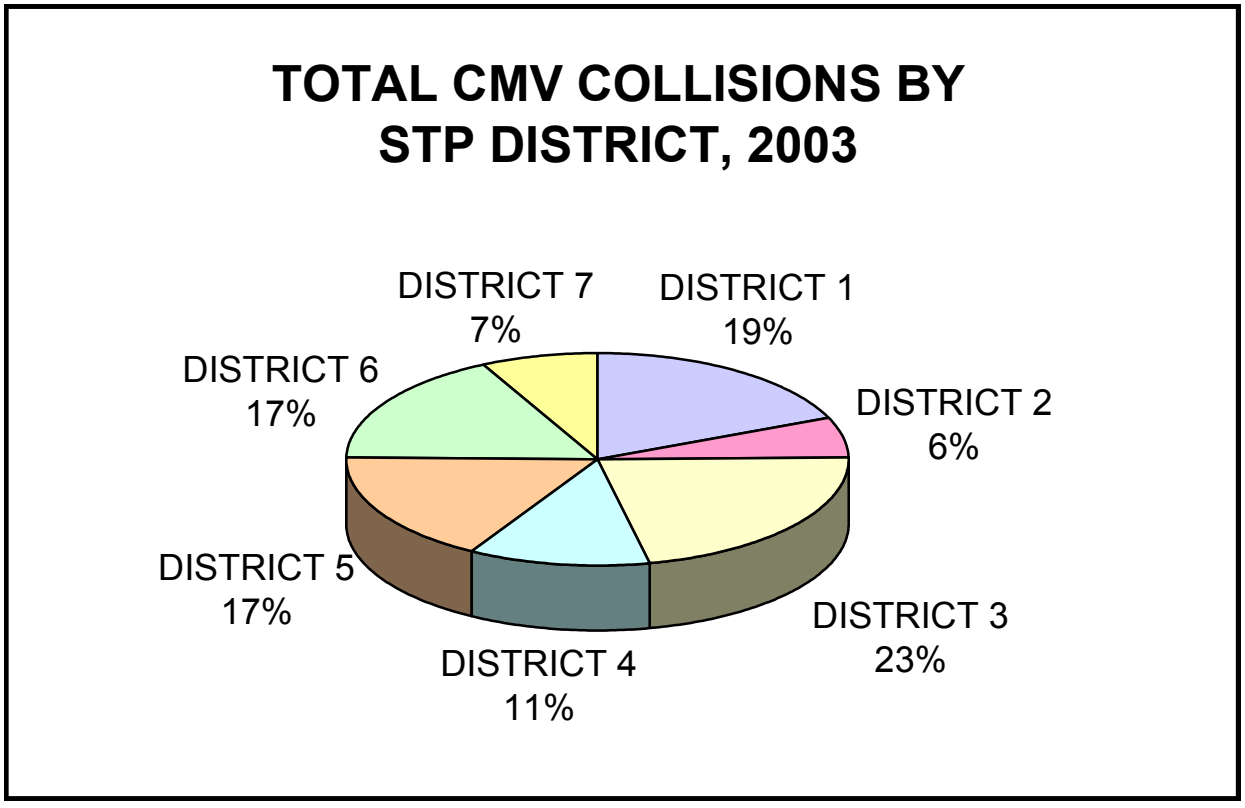
Weigh-in-Motion (W)

CMV COLLISIONS BY STATE TRANSPORT POLICE DISTRICT

STATE TRANSPORT POLICE DISTRICT	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
1	14	286	286	586	18	458
2	7	88	100	195	8	159
3	18	282	400	700	21	428
4	11	168	182	361	11	312
5	20	280	240	540	20	480
6	16	277	253	546	18	470
7	5	107	125	237	6	161
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

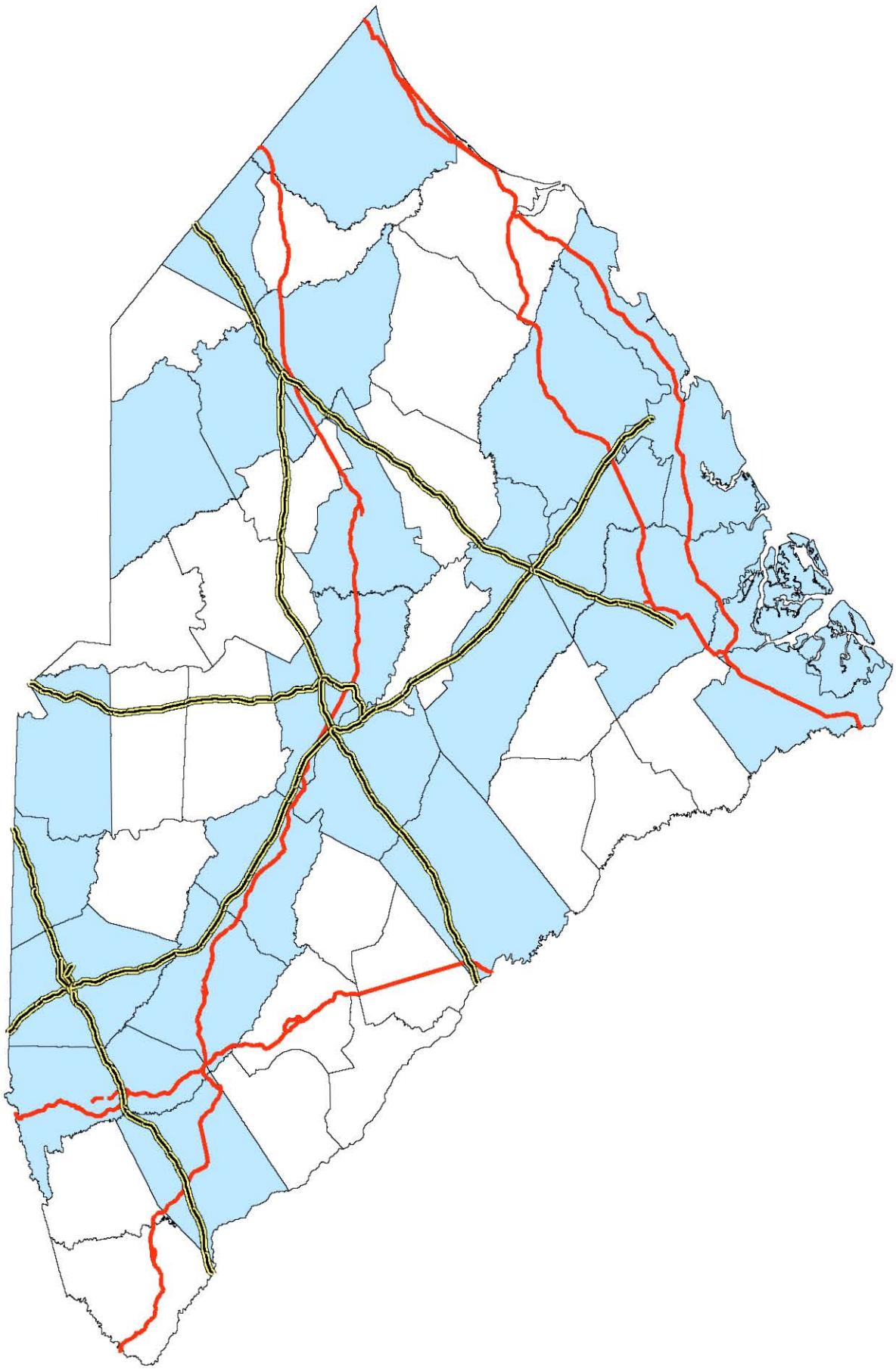
Only 6% of CMV collisions occurred in District 2 in 2003. On the other hand, 22% of CMV collisions occurred in District 3. District 3 was the leading district for fatalities (20.1%); District 5 was the top district for injuries (almost 20% of the persons injured in collisions were in District 5).



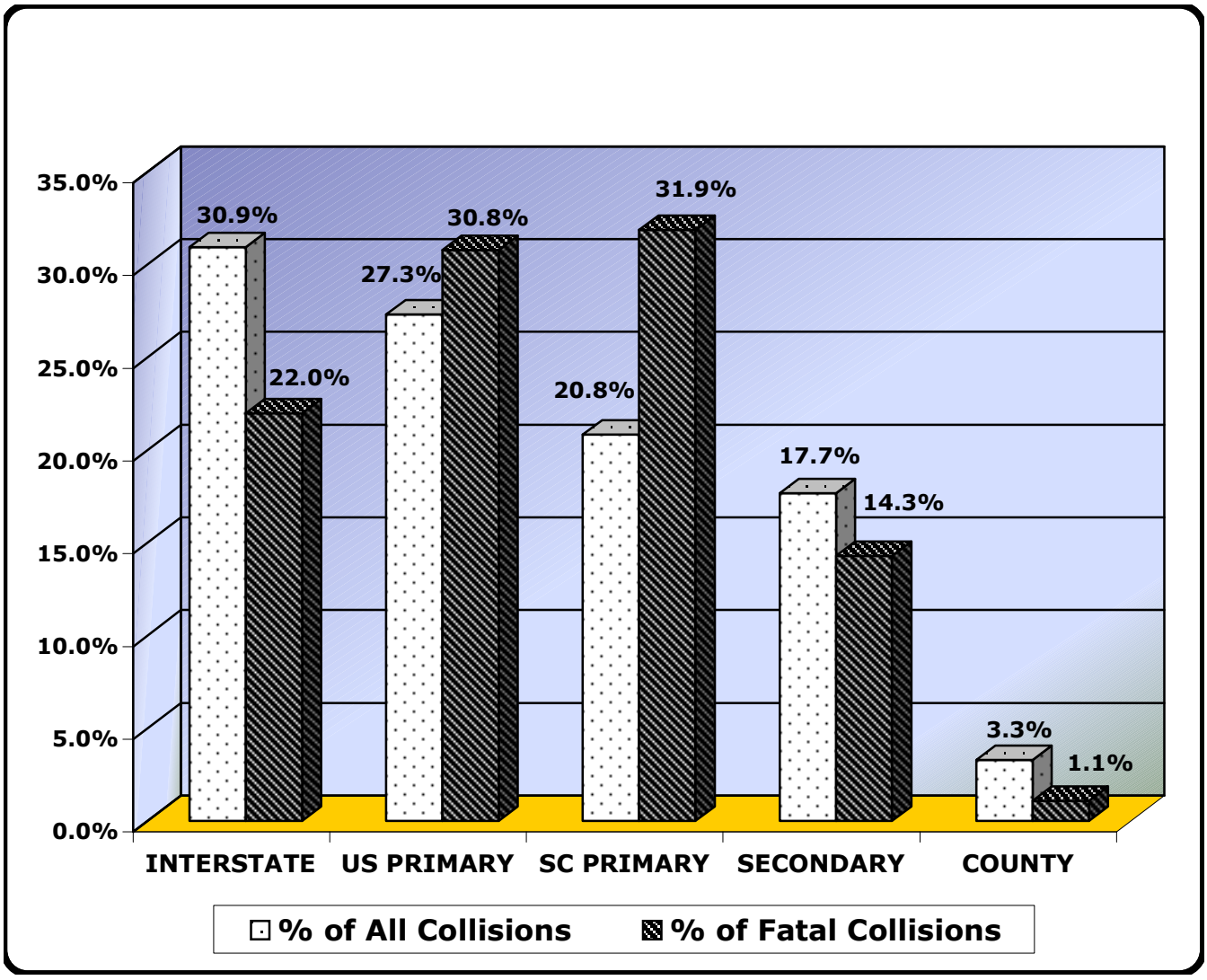
CMV COLLISIONS BY COUNTY (IN DESCENDING ORDER)

COUNTY	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
GREENVILLE	6	113	144	263	6	167
SPARTANBURG	6	94	154	254	8	146
RICHLAND	4	101	110	215	4	180
FLORENCE	5	87	93	185	5	132
CHARLESTON	4	107	74	185	4	191
LEXINGTON	2	76	69	147	3	114
ANDERSON	3	51	70	124	3	82
ORANGEBURG	3	57	64	124	3	80
HORRY	5	69	39	113	5	100
JASPER	5	37	50	92	7	76
CHEROKEE	3	34	53	90	3	80
YORK	2	43	44	89	2	75
AIKEN	1	42	39	82	1	67
BERKELEY	0	46	31	77	0	68
DORCHESTER	3	32	39	74	3	55
DARLINGTON	1	35	32	68	1	85
SUMTER	5	25	33	63	6	40
BEAUFORT	1	32	26	59	1	43
COLLETON	3	23	33	59	3	37
LAURENS	4	22	32	58	4	48
NEWBERRY	1	26	28	55	1	43
DILLON	1	21	33	55	1	42
CHESTERFIELD	1	32	18	51	1	49
KERSHAW	2	23	24	49	4	31
CHESTER	2	18	24	44	2	30
GEORGETOWN	2	26	14	42	2	44
LANCASTER	1	20	20	41	1	44
CLARENDON	1	15	17	33	1	26
GREENWOOD	0	16	16	32	0	28
OCONEE	3	14	15	32	4	18
LEE	0	19	11	30	0	26
WILLIAMSBURG	3	13	12	28	3	27
PICKENS	0	10	17	27	0	15
CALHOUN	0	12	15	27	0	18
MARLBORO	2	18	7	27	2	33
FAIRFIELD	0	11	15	26	0	14
SALUDA	1	11	10	22	1	19
MARION	1	11	10	22	1	17
HAMPTON	0	9	13	22	0	17
UNION	2	10	8	20	2	20
EDGEFIELD	1	8	7	16	2	14
BARNWELL	0	8	5	13	0	12
BAMBERG	1	5	6	12	2	6
ABBEVILLE	0	4	6	10	0	6
ALLENDALE	0	1	5	6	0	2
MCCORMICK	0	1	1	2	0	1
TOTAL	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only



CMV COLLISIONS BY ROUTE CATEGORY



Most CMV collisions occurred on Interstates (30.9%). The second most common route for CMV collisions was US Primaries (27.3%). However, in fatal CMV collisions, 31.9% occurred on SC Primary roadways. 30.8% of fatal CMV collisions occurred on US Primary roadways. There was roughly the same percentage of total collisions as there were fatal collisions on secondary roadways for CMV collisions in 2003.

CMV TRAFFIC COLLISIONS ON SOUTH CAROLINA INTERSTATES

INTERSTATE 95	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
CLARENDON	1	8	11	20	1	14	34.22
COLLETON	3	3	16	22	3	7	28.30
DARLINGTON	0	1	0	1	0	3	1.57
DILLON	0	10	26	36	0	22	23.77
DORCHESTER	0	8	14	22	0	15	16.04
FLORENCE	2	24	45	71	2	37	26.65
HAMPTON	0	3	8	11	0	3	6.61
JASPER	4	17	26	47	5	43	33.90
ORANGEBURG	0	1	8	9	0	1	14.84
SUMTER	1	1	5	7	1	3	12.86
I-95 TOTALS	**11**	**76**	**159**	**246**	**12**	**148**	**198.76**

INTERSTATE 85	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
ANDERSON	1	17	33	51	1	24	36.57
CHEROKEE	1	14	32	47	1	39	22.80
GREENVILLE	0	19	39	58	0	24	15.29
OCONEE	0	4	3	7	0	6	4.03
SPARTANBURG	1	24	48	73	1	35	27.59
I-85 TOTALS	**3**	**78**	**155**	**236**	**3**	**128**	**106.28**

INTERSTATE 26	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
BERKELEY	0	4	7	11	0	7	17.55
CALHOUN	0	4	13	17	0	6	17.44
CHARLESTON	2	15	20	37	2	29	16.95
DORCHESTER	0	1	3	4	0	2	17.42
LAURENS	0	0	11	11	0	0	15.58
LEXINGTON	0	22	16	38	0	27	21.83
NEWBERRY	0	7	16	23	0	21	27.76
ORANGEBURG	0	12	18	30	0	14	28.28
RICHLAND	0	9	15	24	0	17	12.45
SPARTANBURG	0	7	26	33	0	11	45.69
I-26 TOTALS	**2**	**81**	**145**	**228**	**2**	**134**	**220.95**

INTERSTATE 20	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
AIKEN	1	11	13	25	1	15	37.17
DARLINGTON	0	4	8	12	0	5	13.01
FLORENCE	0	1	0	1	0	1	2.36
KERSHAW	0	7	9	16	0	8	21.26
LEE	0	3	8	11	0	5	20.33
LEXINGTON	0	6	11	17	0	8	26.95
RICHLAND	0	17	26	43	0	28	20.43
I-20 TOTALS	**1**	**49**	**75**	**125**	**1**	**70**	**141.51**

INTERSTATE 77	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
CHESTER	2	3	13	18	2	6	18.82
FAIRFIELD	0	3	8	11	0	3	21.46
LEXINGTON	0	3	3	6	0	4	3.16
RICHLAND	0	12	18	30	0	24	26.27
YORK	0	12	15	27	0	25	21.34
I-77 TOTALS	**2**	**33**	**57**	**92**	**2**	**62**	**91.05**

*Property Damage Only

TOP 5 HIGHWAYS FOR CMV TRAFFIC COLLISIONS**

U.S. 17	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
BEAUFORT	0	6	5	11	0	8	12.65
BERKELEY	0	7	5	12	0	9	38.37
CHARLESTON	1	20	10	31	1	32	74.72
COLLETON	0	3	8	11	0	5	17.31
DORCHESTER	0	1	4	5	0	6	16.42
GEORGETOWN	2	9	8	19	2	15	38.02
HORRY	1	14	5	20	1	20	35.88
JASPER	0	5	6	11	0	11	32.39
U.S. 17 TOTALS	**4**	**65**	**51**	**120**	**4**	**106**	**265.76**

U.S. 25	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
AIKEN	0	7	6	13	0	9	7.93
EDGEFIELD	0	6	4	10	0	10	32.24
GREENVILLE	1	27	26	54	1	43	53.89
GREENWOOD	0	7	3	10	0	12	36.99
LAURENS	0	1	0	1	0	2	8.88
U.S. 25 TOTALS	**1**	**48**	**39**	**88**	**1**	**76**	**139.93**

U.S. 76	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
ANDERSON	0	5	2	7	0	5	38.18
FLORENCE	0	8	6	14	0	14	30.96
GREENVILLE	0	0	0	0	0	0	2.16
HORRY	0	0	0	0	0	0	7.32
LAURENS	0	0	1	1	0	0	34.87
LEE	0	0	0	0	0	0	9.76
LEXINGTON	0	0	1	1	0	0	4.96
MARION	1	3	3	7	1	5	26.03
NEWBERRY	0	5	1	6	0	7	29.83
OCONEE	1	1	1	3	1	1	34.11
PICKENS	0	1	0	1	0	1	4.37
RICHLAND	1	6	7	14	1	14	35.10
SUMTER	1	5	3	9	1	10	28.66
U.S. 76 TOTALS	**4**	**34**	**25**	**63**	**4**	**57**	**286.31**

U.S. 52	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
BERKELEY	0	6	2	8	0	7	37.76
CHARLESTON	0	5	3	8	0	5	15.06
CHESTERFIELD	0	3	0	3	0	5	19.36
DARLINGTON	0	12	7	19	0	20	20.73
FLORENCE	1	11	7	19	1	15	30.57
WILLIAMSBURG	0	3	0	3	0	10	29.05
U.S. 52 TOTALS	**1**	**40**	**19**	**60**	**1**	**62**	**152.53**

S.C. 9	COLLISION TYPE			TOTAL	PERSONS		MILES
COUNTY	FATAL	INJURY	PDO*		KILLED	INJURED	
CHESTER	0	5	4	9	0	6	37.15
CHESTERFIELD	0	7	5	12	0	8	34.30
DILLON	0	1	1	2	0	8	30.68
HORRY	1	4	1	6	1	8	40.45
LANCASTER	0	5	2	7	0	6	19.85
MARLBORO	0	2	3	5	0	5	25.71
SPARTANBURG	0	1	4	5	0	1	21.24
UNION	0	1	3	4	0	1	20.39
S.C. 9	**1**	**26**	**23**	**50**	**1**	**43**	**229.77**

*Property Damage Only

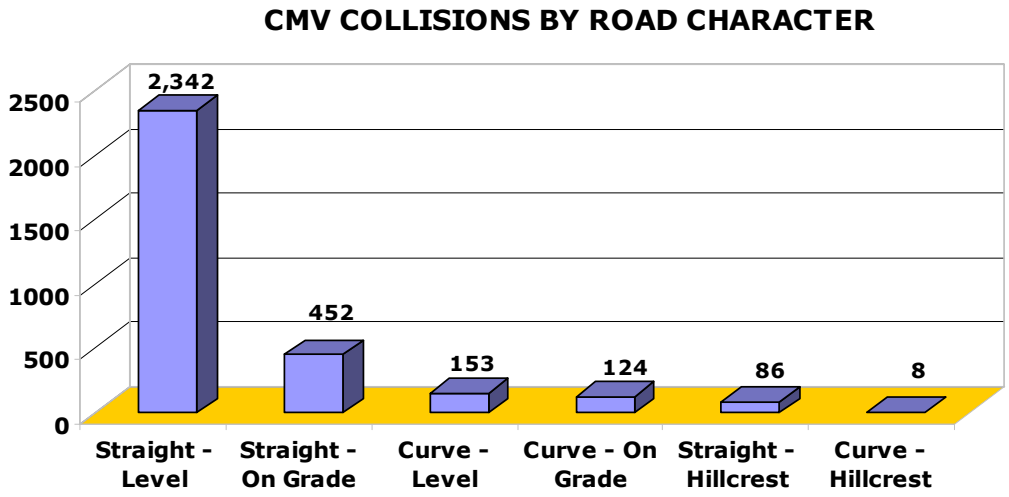
**These are collisions on the highway's mainline and alternate routes.

D. Environment

The environment in which motorists operate their commercial motor vehicles can contribute to the occurrence of traffic crashes. Environment is defined herein as the combination of external or extrinsic physical conditions that affect and influence the operation of a motor vehicle. These include road surface, weather, light conditions, traffic control, and road character for each driver.

One or more of the environmental factors can be the primary cause of a collision or may be a contributing factor in a given crash. Weather, light, surface conditions and locales are substantially beyond the control of engineering or law enforcement efforts. Changes in traffic controls, and road character factors can all be effected by traffic engineering efforts.

As reflected in the statistics on the next two pages, most collisions occur under favorable environmental conditions: dry roadway (78.9%): clear weather (70.6%); daylight (75.6%); and straight-level road (74.0%).



ROAD SURFACE CONDITIONS

ROAD SURFACE CONDITIONS	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
Dry	77	1,220	1,200	2,497	86	2,034
Wet	13	235	345	593	15	372
Icy	1	21	17	39	1	34
Slushy	0	0	1	1	0	0
Snowy	0	4	13	17	0	14
Contaminant (Sandy, Muddy, etc.)	0	0	1	1	0	0
Water (Standing)	0	3	5	8	0	5
Other	0	1	1	2	0	1
Unknown	0	4	3	7	0	8
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

WEATHER CONDITIONS

WEATHER CONDITIONS	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
Clear/No Adverse Conditions	65	1,095	1,073	2,233	73	1,794
Rain	5	191	284	480	7	306
Cloudy	17	167	185	369	18	295
Sleet or Hail	1	11	4	16	1	25
Snow	0	9	19	28	0	22
Fog/Smog/Smoke	3	14	16	33	3	24
Blowing Sand, Soil, Dirt or Snow	0	1	0	1	0	2
Severe Cross Wind, High Wind	0	0	3	3	0	0
Other	0	0	0	0	0	0
Unknown	0	0	2	2	0	0
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

ROAD CHARACTER

ROAD CHARACTER	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
Straight - Level	64	1,122	1,156	2,342	72	1,893
Straight - On Grade	17	199	236	452	19	317
Straight - Hillcrest	0	36	50	86	0	64
Curve - Level	4	78	71	153	4	129
Curve - On Grade	4	51	69	124	4	63
Curve - Hillcrest	2	2	4	8	3	2
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

WORK ZONE TYPE

WORK ZONE TYPE	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
None**	81	1,418	1,495	2,994	92	2,336
Shoulder/Median Work	1	31	46	78	1	67
Lane Shift/Crossover	1	6	12	19	1	11
Intermittent/Moving Work	3	7	9	19	3	12
Lane Closure	3	8	7	18	3	14
Other	2	12	16	30	2	17
Unknown	0	6	1	7	0	11
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

** Includes collisions where no work zone type was recorded.

LIGHT CONDITIONS

LIGHT CONDITIONS	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
Daylight	56	1,165	1,173	2,394	63	1,938
Dawn	4	31	50	85	4	53
Dusk	1	24	29	54	1	41
Dark (Lighting Unspecified)	2	21	34	57	2	34
Dark (Street Lamp Lit)	3	54	50	107	3	93
Dark (Street Lamp Not Lit)	0	9	10	19	0	12
Dark (No Lights)	25	184	240	449	29	297
Unknown	0	0	0	0	0	0
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

TRAFFIC CONTROLS

TRAFFIC CONTROLS	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
Stop and Go Signal	7	220	152	379	8	364
Flashing Traffic Signal	0	6	2	8	0	18
RR Crossing: Gates/Lights	0	2	1	3	0	2
RR X-Bucks & Flashing Lights	0	2	2	4	0	2
RR Crossbucks Only	0	2	5	7	0	2
Officer or Flagman	1	5	4	10	1	6
Oncoming Emergency Vehicle	0	2	0	2	0	2
Pavement Markings (Only)	3	36	58	97	3	64
Stop Sign	17	184	140	341	21	324
School Zone Sign	0	0	2	2	0	0
Yield Sign	2	25	35	62	2	46
Work Zone Sign	3	15	27	45	3	39
Other Warning Signs	7	22	25	54	9	59
Flashing Beacon	0	1	1	2	0	3
None	51	959	1,127	2,137	55	1,527
Unknown	0	7	5	12	0	10
TOTALS	**91**	**1,488**	**1,586**	**3,165**	**102**	**2,468**

*Property Damage Only

E. Units

The types of 'units' that are involved affect the consequences of traffic collisions. Large trucks are usually heavier than smaller commercial vehicles. Thus, heavier vehicles produce more damage than lighter vehicles. This section presents information on large trucks involved in fatal, injury, and property damage only crashes. Some of the key findings in the 2003 data are as follows:

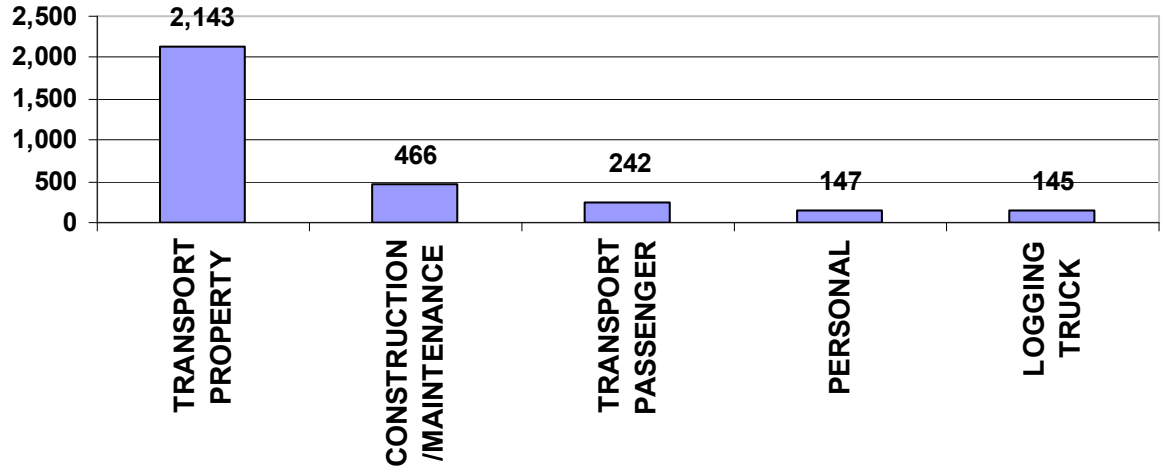
- The most common unit involved in CMV traffic crashes in 2003 was the truck tractor. Out of 6,309 units involved in CMV traffic collisions during the year, 3,388 units were CMV units and 2,921 units were non-CMV units. Out of the 3,388 CMV's, 2,263 were truck tractors. This represents 67% of the CMV units involved in commercial motor vehicle crashes.

- For fatal collisions, a smaller percentage of units were truck tractors. Of the 197 units involved in fatal collisions, 70 or 35.5% were truck tractors.

- A total of 7 pedestrians were involved in fatal CMV collisions in 2003. This represents 3.6% of all units involved in fatal CMV traffic crashes during the year.

- Automobiles were the second most common unit involved in CMV traffic crashes in 2003. 1,766 automobiles were involved in CMV traffic collisions in 2003, accounting for 28% of all units in CMV traffic collisions.

TOP FIVE VEHICLE USE CODES FOR CMV UNITS (ONLY) IN CMV COLLISIONS



E. Units

The types of 'units' that are involved affect the consequences of traffic collisions. Large trucks are usually heavier than smaller commercial vehicles. Thus, heavier vehicles produce more damage than lighter vehicles. This section presents information on large trucks involved in fatal, injury, and property damage only crashes. Some of the key findings in the 2003 data are as follows:

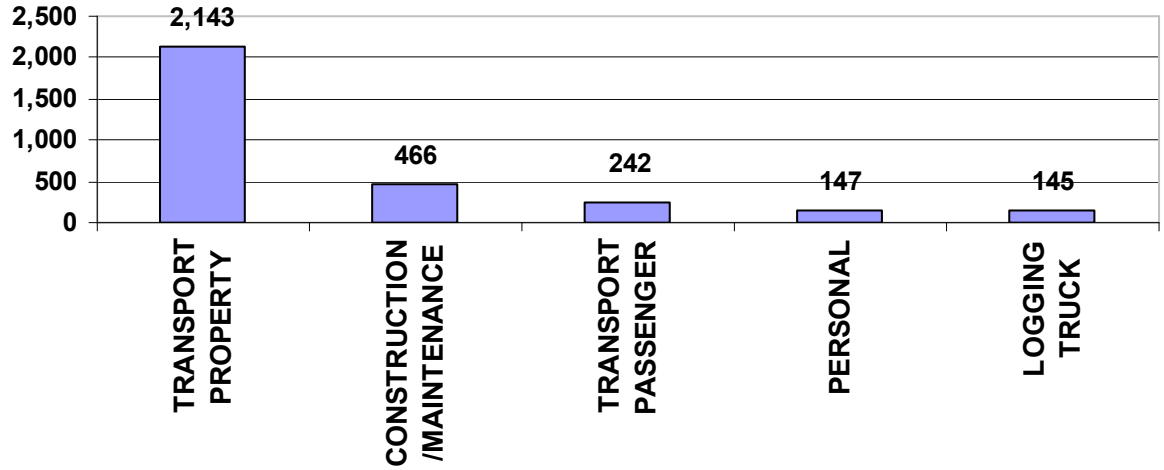
- The most common unit involved in CMV traffic crashes in 2003 was the truck tractor. Out of 6,309 units involved in CMV traffic collisions during the year, 3,388 units were CMV units and 2,921 units were non-CMV units. Out of the 3,388 CMV's, 2,263 were truck tractors. This represents 67% of the CMV units involved in commercial motor vehicle crashes.

- For fatal collisions, a smaller percentage of units were truck tractors. Of the 197 units involved in fatal collisions, 70 or 35.5% were truck tractors.

- A total of 7 pedestrians were involved in fatal CMV collisions in 2003. This represents 3.6% of all units involved in fatal CMV traffic crashes during the year.

- Automobiles were the second most common unit involved in CMV traffic crashes in 2003. 1,766 automobiles were involved in CMV traffic collisions in 2003, accounting for 28% of all units in CMV traffic collisions.

TOP FIVE VEHICLE USE CODES FOR CMV UNITS (ONLY) IN CMV COLLISIONS



UNIT TYPES**

UNIT TYPES	COLLISION TYPE			TOTAL
	FATAL	INJURY	PDO*	
Truck Tractor	70	979	1,214	2,263
Automobile	50	909	807	1,766
Other Truck	28	465	403	896
Pickup Truck	16	265	265	546
SUV	10	167	115	292
School Bus	0	100	61	161
Mini Van	4	66	62	132
Full Size Van	3	51	30	84
Passenger Bus	0	38	30	68
Other	3	15	10	28
Unknown (Hit & Run Only)	0	10	15	25
Pedestrian	7	12	1	20
Motorcycle	4	8	1	13
Train	0	3	6	9
Pedalcycle	2	3	0	5
Other Motorbike	0	1	0	1
TOTALS	**197**	**3,092**	**3,020**	**6,309**

*Property Damage Only

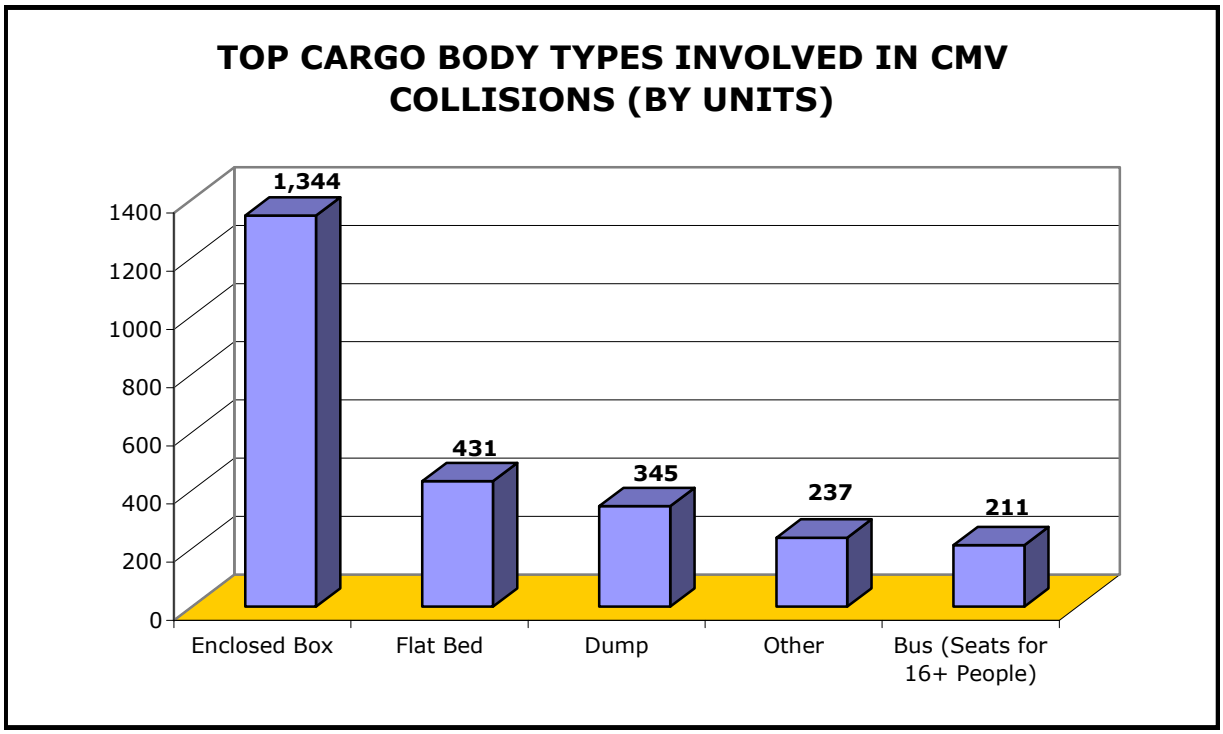
**This table includes all units involved in CMV collisions.

VEHICLE USE IN TRAFFIC COLLISIONS (EXCLUDES PEDESTRIANS)**

VEHICLE USE	COLLISION TYPE			TOTAL
	FATAL	INJURY	PDO*	
Personal	92	1,441	1,290	2,823
Transport Property	70	960	1,187	2,217
Construction/Maintenance	17	282	237	536
Transport Passenger	1	147	108	256
Logging Truck	3	82	62	147
Other	4	63	67	134
Wrecker or Tow	0	29	22	51
Government	2	17	15	34
Farm Use	1	21	12	34
Fire Fighting	0	11	6	17
Driver Training	0	11	4	15
Police	0	9	6	15
Ambulance	0	7	2	9
Military	0	0	1	1
TOTALS	**190**	**3,080**	**3,019**	**6,289**

*Property Damage Only

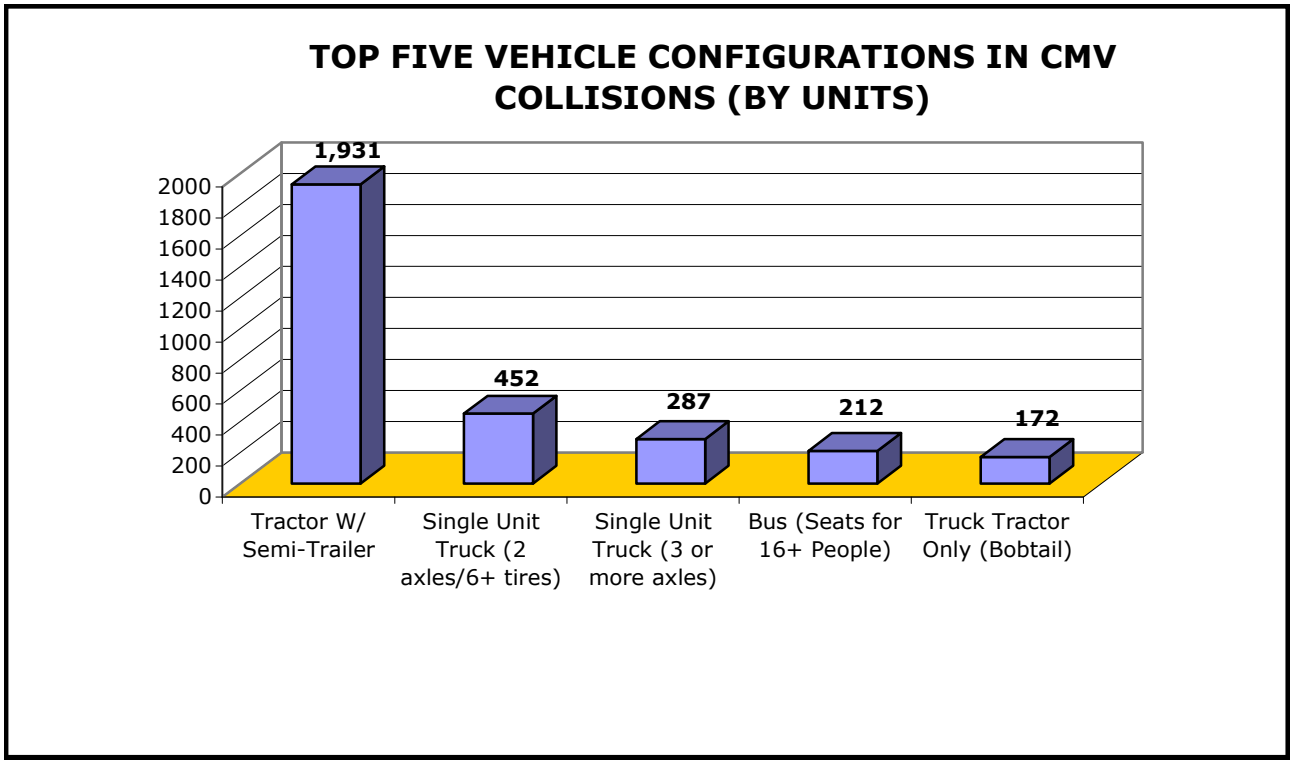
**Excluding pedestrians, this table includes all units involved in CMV collisions



The graph above shows the 5 largest groups for cargo body types of CMV's involved in commercial motor vehicle traffic collisions. The table below refers to all CMV units involved in collisions. 31% of the units involved in fatal collisions were classified as an "enclosed box" cargo body type.

CARGO BODY TYPE	COLLISION TYPE			TOTAL
	FATAL	INJURY	PDO*	
Enclosed Box	34	578	732	1,344
Flat Bed	15	194	222	431
Dump	13	171	161	345
Other	4	120	113	237
Bus (Seats for 16+ people)	0	129	82	211
Cargo Tank	4	78	81	163
Pole	6	69	55	130
Not Applicable	6	60	62	128
Garbage/Refuse	6	57	38	101
Grain, Chips, Gravel	7	38	45	90
Unknown/Hit and Run	0	17	33	50
Auto Transport	1	24	25	50
Concrete Mixer	3	26	18	47
Intermodal Container	2	20	23	45
Bus (Seats for 9 - 15 people)	0	10	3	13
Missing**	0	1	2	3
Total	**101**	**1,592**	**1,695**	**3,388**

*Property Damage Only ** Missing data in the "Cargo Body Type" field



The graph above shows the top 5 categories of vehicle configurations for commercial motor vehicles involved in CMV traffic collisions. This number refers to the number of CMV units (vehicles). The chart below includes all of the categories for vehicle configuration (i.e., formation of the vehicle).

VEHICLE CONFIGURATIONS	COLLISION TYPE			TOTAL
	FATAL	INJURY	PDO*	
Tractor w/ Semi-Trailer	62	851	1,018	1,931
Single Unit Truck (2 axles/6+ tires)	12	223	217	452
Single Unit Truck (3 or more axles)	14	156	117	287
Bus (Seats for 16+ people)	0	130	82	212
Truck Tractor Only (Bobtail)	7	70	95	172
Other/Unable to Classify	3	59	41	103
Unknown/Hit and Run	1	30	59	90
Truck w/ Trailer	1	40	32	73
Tractor w/ Double Trailers	0	17	23	40
Bus (Seats for 9 - 15 people)	1	10	6	17
Light Truck (Only w/ Hazmat Placard)	0	5	1	6
Missing**	0	1	2	3
Passenger Car (Only w/ Hazmat Placard)	0	0	2	2
Total	**101**	**1,592**	**1,695**	**3,388**

* Property Damage Only

** Missing data in the field of "Vehicle Configuration"

COLLISIONS INVOLVING TRUCK TRACTORS BY COUNTY: 1999 - 2003

	1999			2000			2001			2002			2003		
		Persons			Persons			Persons			Persons			Persons	
COUNTY	Total Coll.	Inj.	Killed	Total Coll.	Inj.	Killed	Total Coll.	Inj.	Killed	Total Coll.	Inj.	Killed	Total Coll.	Inj.	Killed
ABBEVILLE	6	3	0	9	5	0	11	10	2	8	3	2	8	6	0
AIKEN	133	68	6	132	54	4	109	59	7	145	62	3	126	42	1
ALLENDALE	13	12	0	15	7	1	12	4	2	9	1	1	9	5	0
ANDERSON	155	73	8	126	54	11	169	73	3	225	78	3	126	39	1
BAMBERG	18	14	1	14	7	0	11	6	0	11	7	0	21	8	2
BARNWELL	18	9	0	7	10	0	7	5	0	7	3	0	15	12	0
BEAUFORT	51	24	3	69	27	1	53	29	1	64	29	1	62	22	0
BERKELEY	108	59	3	119	58	2	110	57	2	129	46	5	110	41	1
CALHOUN	25	16	1	25	14	0	45	11	3	42	19	1	41	13	0
CHARLESTON	393	179	1	365	151	2	358	127	4	361	101	2	362	99	4
CHEROKEE	85	41	6	104	50	1	125	46	1	144	47	1	120	39	2
CHESTER	50	21	0	55	13	1	63	25	1	64	24	0	53	18	2
CHESTERFIELD	68	43	3	88	36	3	59	27	3	64	26	0	60	44	1
CLARENDON	44	11	5	68	31	5	38	32	3	45	20	3	47	28	1
COLLETON	80	35	5	72	33	2	76	56	6	84	34	0	83	32	3
DARLINGTON	66	42	4	66	57	2	64	26	2	71	50	2	71	37	1
DILLON	67	35	3	64	27	0	44	20	0	76	24	1	75	33	1
DORCHESTER	83	34	3	0	0	0	97	35	0	95	47	7	105	38	1
EDGEFIELD	19	5	1	23	6	1	22	19	2	12	5	0	29	12	0
FAIRFIELD	37	19	0	31	18	8	21	13	0	24	23	0	28	9	0
FLORENCE	154	71	2	169	75	5	169	83	3	149	46	1	276	97	3
GEORGETOWN	63	31	4	71	45	3	49	25	0	68	34	3	49	18	2
GREENVILLE	352	91	7	258	80	6	275	80	7	307	72	2	314	83	4
GREENWOOD	41	14	0	54	20	0	37	19	0	31	14	2	34	10	0
HAMPTON	22	4	1	21	7	0	19	12	0	19	11	3	30	12	0
HORRY	141	61	1	156	68	4	137	64	3	144	51	4	127	43	2
JASPER	88	28	6	72	17	4	67	34	1	103	49	1	128	66	7
KERSHAW	63	37	3	61	41	4	57	34	0	47	11	2	69	24	0
LANCASTER	56	17	3	56	28	2	43	20	2	48	17	4	47	21	0
LAURENS	46	17	1	52	18	1	55	25	3	82	31	0	59	14	4
LEE	18	2	1	20	11	0	21	9	0	34	47	0	32	23	0
LEXINGTON	198	71	5	200	89	3	210	94	1	200	69	1	206	91	2
MCCORMICK	9	5	0	10	8	0	9	6	0	9	2	0	5	1	0
MARION	39	28	1	50	35	2	37	14	4	45	14	3	30	13	1
MARLBORO	50	26	1	39	22	1	32	14	3	26	25	1	34	23	2
NEWBERRY	54	24	3	48	30	1	48	23	4	58	14	5	85	43	1
OCONEE	43	13	0	28	17	5	36	14	1	37	10	0	30	8	3
ORANGEBURG	152	71	6	154	87	4	131	63	2	167	62	8	166	66	3
PICKENS	38	11	0	35	16	2	22	5	0	25	8	0	22	5	0
RICHLAND	235	80	7	295	129	6	247	94	2	255	103	2	267	111	3
SALUDA	17	4	0	18	8	1	14	13	0	23	4	2	24	15	1
SPARTANBURG	301	126	3	288	94	4	270	93	6	270	102	2	323	80	7
SUMTER	79	34	2	76	38	1	56	35	2	62	26	3	78	38	4
UNION	17	5	0	22	14	0	25	12	0	21	9	1	16	6	1
WILLIAMSBURG	32	22	0	26	22	1	21	12	1	22	10	2	27	23	2
YORK	152	73	4	169	57	3	119	42	2	141	83	2	131	49	1
TOTAL	3,979	1,709	114	3,900	1,734	107	3,700	1,619	89	4,073	1,573	86	4,160	1,560	74

Part III – Passenger Vehicles

The following pages contain descriptive statistics regarding collisions involving passenger vehicles (i.e., school buses, commercial buses, and full size vans) in South Carolina for the year 2003. Commercial (passenger-carrying) buses are buses that are used for public transportation. This type of bus includes charter and city buses. Full-size vans are vans that are used to transport passengers. This should include shuttle vans and vans used for child care transportation. The data in this section includes applicable information regarding drivers who contributed to the collisions, the trend of collisions since 1999 and any other information necessary to obtain a better assessment of the safety of passenger vehicles.

- There were 351 collisions involving school buses in 2003. 120 or 34% of the school bus collisions occurred between the hours of 3 and 6 PM.

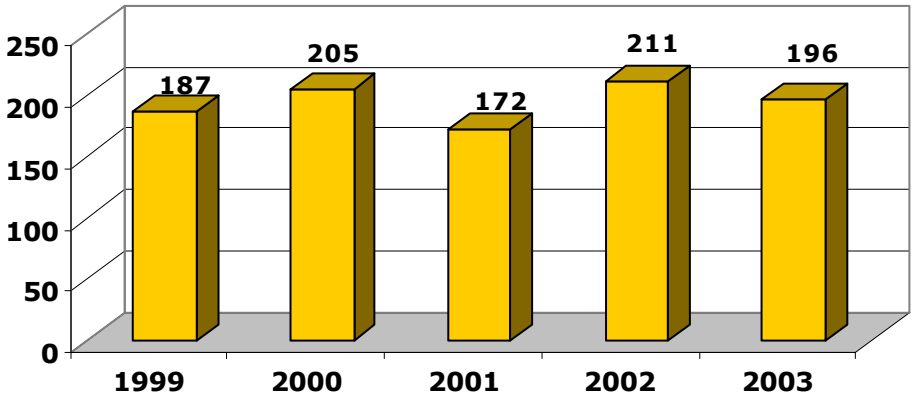
- There were no fatal collisions involving school buses in 2003. However, there were 118 injury collisions; as a result, 405 people were injured.

- In 2003, there were 196 collisions involving (passenger) commercial buses; this is a 7% decrease from the previous year. 38 or 19% of commercial bus collisions occurred on Friday.

- 28% of collisions involving commercial buses (54) happened between 3 and 6 PM.

- 69 out of 251 (27%) collisions involving full size vans happened between 3 and 6 PM. Also, half, or 2 out of 4, of the fatal collisions involving full size vans occurred between the hours of 6 and 9 PM.

TRAFFIC COLLISIONS INVOLVING (PASSENGER) COMMERCIAL BUSES, 1999 - 2003



TRAFFIC COLLISIONS INVOLVING SCHOOL BUSES

COLLISIONS BY YEAR

YEAR	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
1999	3	103	235	341	4	473
2000	2	113	228	343	3	479
2001	4	136	232	372	5	494
2002	4	120	229	353	4	427
2003	0	118	233	351	0	405
TOTALS	**13**	**590**	**1,157**	**1,760**	**16**	**2,278**

COLLISIONS BY MONTH

MONTH	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
January	0	14	21	35	0	46
February	0	15	22	37	0	69
March	0	11	22	33	0	47
April	0	11	27	38	0	58
May	0	14	17	31	0	36
June	0	1	8	9	0	2
July	0	2	2	4	0	3
August	0	10	13	23	0	45
September	0	10	29	39	0	25
October	0	8	18	26	0	20
November	0	9	29	38	0	24
December	0	13	25	38	0	30
TOTALS	**0**	**118**	**233**	**351**	**0**	**405**

COLLISIONS BY LIGHT AND WEATHER CONDITIONS

LIGHT & WEATHER	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
Day & Clear/Cloudy	0	94	197	291	0	346
Dark & Clear/Cloudy	0	2	6	8	0	4
Day & Rain	0	15	26	41	0	27
Dark & Rain	0	0	3	3	0	0
Day & Other Weather	0	7	1	8	0	28
Dark & Other Weather	0	0	0	0	0	0
TOTALS	**0**	**118**	**233**	**351**	**0**	**405**

TRAFFIC COLLISIONS INVOLVING SCHOOL BUSES

COLLISIONS BY DAY OF THE WEEK

DAY OF WEEK	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
SUNDAY	0	1	4	5	0	1
MONDAY	0	16	31	47	0	41
TUESDAY	0	17	41	58	0	91
WEDNESDAY	0	30	52	82	0	87
THURSDAY	0	25	61	86	0	80
FRIDAY	0	29	41	70	0	105
SATURDAY	0	0	3	3	0	0
TOTALS	**0**	**118**	**233**	**351**	**0**	**405**

* Property Damage Only

COLLISIONS BY TIME OF DAY

TIME OF DAY	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
12:01 am - 3:00 am	0	1	0	1	0	14
3:01 am - 6:00 am	0	1	1	2	0	1
6:01 am - 9:00 am	0	45	75	3	0	147
9:01 am - Noon	0	10	19	29	0	15
12:01 pm - 3:00 pm	0	16	57	73	0	27
3:01 pm - 6:00 pm	0	44	76	120	0	193
6:01 pm - 9:00 pm	0	1	5	6	0	8
9:01 pm - Midnight	0	0	0	0	0	0
TOTALS	**0**	**118**	**233**	**351**	**0**	**405**

*Property Damage Only

DRIVERS IN COLLISIONS WHO CONTRIBUTED TO COLLISION

UNITS INVOLVED	COLLISION TYPE			TOTALS
	Fatal	Injury	PDO*	
Bus Driver Contributed	0	44	88	132
Bus Driver Did Not Contribute	0	77	147	224
TOTAL SCHOOL BUS DRIVERS	**0**	**121**	**235**	**356**
Other Driver Contributed	0	72	149	221
Other Driver Did Not Contribute	0	55	84	139
TOTAL OTHER DRIVERS	**0**	**127**	**233**	**360**
TOTALS	**0**	**248**	**468**	**716**

*Property Damage Only

**Includes all fatalities and injuries, not just to the bus riders

TRAFFIC COLLISIONS INVOLVING COMMERCIAL BUSES

COLLISIONS BY YEAR

YEAR	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
1999	2	70	115	187	2	252
2000	0	76	129	205	0	203
2001	3	53	116	172	5	165
2002	1	59	151	211	4	427
2003	0	63	133	196	0	133
TOTALS	**6**	**321**	**644**	**971**	**11**	**1,180**

COLLISIONS BY MONTH

MONTH	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
January	0	6	10	16	0	10
February	0	4	9	13	0	13
March	0	6	10	16	0	9
April	0	4	10	14	0	7
May	0	6	5	11	0	12
June	0	5	13	18	0	5
July	0	7	12	19	0	12
August	0	5	8	13	0	8
September	0	4	14	18	0	14
October	0	6	21	27	0	26
November	0	3	6	9	0	5
December	0	7	15	22	0	12
TOTALS	**0**	**63**	**133**	**196**	**0**	**133**

COLLISIONS BY LIGHT AND WEATHER CONDITIONS

LIGHT & WEATHER	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
Day & Clear/Cloudy	0	46	96	142	0	104
Dark & Clear/Cloudy	0	9	13	22	0	16
Day & Rain	0	7	22	29	0	12
Dark & Rain	0	1	1	2	0	1
Day & Other Weather	0	0	0	0	0	0
Dark & Other Weather	0	0	1	1	0	0
TOTALS	**0**	**63**	**133**	**196**	**0**	**133**

TRAFFIC COLLISIONS INVOLVING COMMERCIAL BUSES

COLLISIONS BY DAY OF THE WEEK

DAY OF WEEK	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
SUNDAY	0	3	8	11	0	6
MONDAY	0	14	17	31	0	22
TUESDAY	0	12	17	29	0	17
WEDNESDAY	0	9	22	31	0	14
THURSDAY	0	13	22	35	0	39
FRIDAY	0	8	30	38	0	30
SATURDAY	0	4	17	21	0	5
TOTALS	**0**	**63**	**133**	**196**	**0**	**133**

* Property Damage Only

COLLISIONS BY TIME OF DAY

TIME OF DAY	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
12:01 am - 3:00 am	0	2	6	8	0	3
3:01 am - 6:00 am	0	1	5	6	0	2
6:01 am - 9:00 am	0	8	18	26	0	34
9:01 am - Noon	0	10	24	34	0	15
12:01 pm - 3:00 pm	0	18	30	48	0	39
3:01 pm - 6:00 pm	0	17	37	54	0	27
6:01 pm - 9:00 pm	0	6	10	16	0	12
9:01 pm - Midnight	0	1	3	4	0	1
TOTALS	**0**	**63**	**133**	**196**	**0**	**133**

*Property Damage Only

DRIVERS IN COLLISIONS WHO CONTRIBUTED TO COLLISION

UNITS INVOLVED	COLLISION TYPE			TOTALS
	Fatal	Injury	PDO*	
Bus Driver Contributed	0	25	54	79
Bus Driver Did Not Contribute	0	39	80	119
TOTAL BUS DRIVERS	**0**	**64**	**134**	**198**
Other Driver Contributed	0	41	73	114
Other Driver Did Not Contribute	0	31	58	89
TOTAL OTHER DRIVERS	**0**	**72**	**131**	203
TOTALS	**0**	**136**	**265**	**401**

*Property Damage Only

**Includes all fatalities and injuries, not just to the bus riders

TRAFFIC COLLISIONS INVOLVING FULL SIZE VANS

COLLISIONS BY YEAR

YEAR	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
1999	3	124	187	314	10	274
2000	2	86	194	282	2	218
2001	3	98	163	264	3	232
2002	2	79	198	279	2	206
2003	4	86	161	251	6	240
TOTALS	**14**	**473**	**903**	**1,390**	**23**	**1,170**

* Property Damage Only

COLLISIONS BY MONTH

MONTH	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
January	0	4	7	11	0	5
February	0	7	12	19	0	12
March	0	9	19	28	0	41
April	1	5	16	22	1	23
May	0	7	14	21	0	30
June	0	13	10	23	0	29
July	1	5	15	21	1	17
August	0	6	6	12	0	12
September	0	11	18	29	0	20
October	1	4	13	18	1	9
November	0	8	15	23	0	18
December	1	7	16	24	3	24
TOTALS	**4**	**86**	**161**	**251**	**6**	**240**

* Property Damage Only

COLLISIONS BY LIGHT AND WEATHER CONDITIONS

LIGHT & WEATHER	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
Day & Clear/Cloudy	2	66	114	182	2	181
Dark & Clear/Cloudy	1	10	16	27	3	36
Day & Rain	0	9	26	35	0	20
Dark & Rain	1	1	4	6	1	3
Day & Other Weather	0	0	0	0	0	0
Dark & Other Weather	0	0	1	1	0	0
TOTALS	**4**	**86**	**161**	**251**	**6**	**240**

* Property Damage Only

** Includes all fatalities and injuries, not just to the van riders.

TRAFFIC COLLISIONS INVOLVING FULL SIZE VANS

COLLISIONS BY DAY OF THE WEEK

DAY OF WEEK	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
SUNDAY	1	5	11	17	3	42
MONDAY	0	13	29	42	0	36
TUESDAY	1	14	21	36	1	34
WEDNESDAY	1	16	26	43	1	30
THURSDAY	0	13	34	47	0	24
FRIDAY	1	14	27	42	1	25
SATURDAY	0	11	13	24	0	49
TOTALS	**4**	**86**	**161**	**251**	**6**	**240**

* Property Damage Only

COLLISIONS BY TIME OF DAY

TIME OF DAY	COLLISION TYPE				PERSONS**	
	Fatal	Injury	PDO*	Total	Killed	Injured
12:01 am - 3:00 am	0	0	3	3	0	0
3:01 am - 6:00 am	0	1	3	4	0	1
6:01 am - 9:00 am	0	14	24	38	0	43
9:01 am - Noon	0	12	27	39	0	47
12:01 pm - 3:00 pm	0	22	43	65	0	54
3:01 pm - 6:00 pm	1	24	44	69	1	49
6:01 pm - 9:00 pm	2	10	8	20	4	38
9:01 pm - Midnight	1	3	9	13	1	8
TOTALS	**4**	**86**	**161**	**251**	**6**	**240**

*Property Damage Only

DRIVERS IN COLLISIONS WHO CONTRIBUTED TO COLLISION

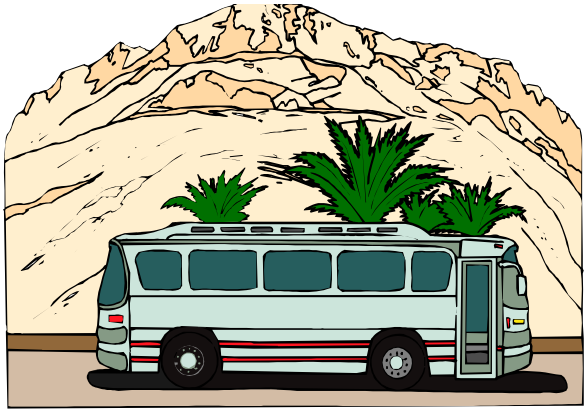
UNITS INVOLVED	COLLISION TYPE			TOTALS
	Fatal	Injury	PDO*	
Van Driver Contributed	1	37	72	110
Van Driver Did Not Contribute	3	50	90	143
TOTAL VAN DRIVERS	**4**	**87**	**162**	**253**
Other Driver Contributed	2	42	84	128
Other Driver Did Not Contribute	1	52	80	133
TOTAL OTHER DRIVERS	**3**	**94**	**164**	**261**
TOTALS	**7**	**181**	**326**	**514**

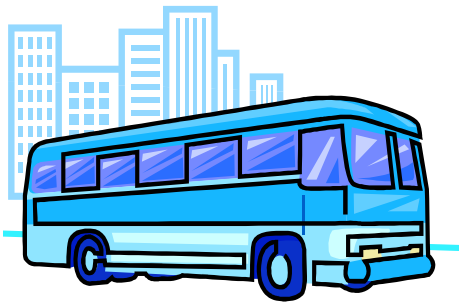
*Property Damage Only

**Includes all fatalities and injuries, not just to the van riders

School Bus

Passenger-Carrying (Commercial) Bus





Full Size Van

Part IV - Collision Consequences

The consequences of traffic collisions extend beyond those persons directly affected and are measured in both human and economic terms. The economic costs consider that portion of financial loss born by society, i.e. medical costs, property damage, lost productivity, etc. Opposite the economic losses are the intangible human costs associated with the grief and suffering that accompany a traffic death or injury. On the following pages, statistics related to estimated economic cost, traffic injuries, fatalities and restraint usage are presented. Some important observations in the 2003 data are as follows:

- Economic loss from CMV involved collisions decreased 10% from 2002 to 2003.
- Males accounted for 90% of the fatalities of CMV occupants and 59% of the fatalities of Non-CMV occupants, while females accounted for 10% and 41% respectively.
- 24% of Non-CMV occupant fatalities were persons under age 25. There were 20 CMV occupant fatalities and one person was under 25.
- There were 17 CMV occupants totally ejected from the vehicles in which they were riding. Of these, 2 or 11.8% was killed. Of the 3,988 CMV occupants not ejected, 14, or 0.4% were killed.
- There were 22 Non-CMV occupants in CMV collisions that were totally ejected from their vehicles. Of these, 7 or 31.8% were killed. Of the 3,987 Non-CMV occupants not ejected, 62 or 1.6% were killed.
- In CMV collisions, because of the sheer size and weight of the vehicles involved, restraint usage becomes a major factor in predicting injury severity. Of the 419 Non-CMV occupants in CMV collisions that were not restrained, 32 or 7.6% sustained fatal injuries. Of the 3,502 Non-CMV occupants that were using some form of restraint device, 34 or 0.97% sustained fatal injuries.
- 1.6% of CMV occupants that were not using any type of restraint equipment sustained fatal injuries. Less than 1% of the restrained CMV occupants were killed (0.15%).

The car shown was hit as it turned in to the path of a loaded semi truck (see page 14). The car was hit on the passenger side, pushed off the road, clipped the corner of a hours and came to rest against a tree. Two passengers, one female and a small child, died as a result. The driver of the car sustained serious injuries.

CMV OCCUPANTS INVOLVED IN CMV TRAFFIC COLLISIONS TRANSPORTED TO MEDICAL FACILITY

TRANSPORTED TO MEDICAL FACILITY	INJURY TYPE					TOTAL
	NOT INJURED	POSSIBLE INJURY	NON-INCAPACITATING	INCAPACITATING	FATAL	
YES						
Males	39	278	147	57	14	535
Females	15	155	37	7	2	216
Not Specified	0	0	0	0	0	0
YES SUBTOTAL	**54**	**433**	**184**	**64**	**16**	**751**
NO						
Males	2,775	62	8	1	4	2,850
Females	334	17	3	0	0	354
Not Specified	105	0	0	0	0	105
NO SUBTOTAL	**3,214**	**79**	**11**	**1**	**4**	**3,309**
UNKNOWN						
Males	9	1	0	0	0	10
Females	4	0	0	0	0	4
Not Specified	34	0	0	0	0	34
UNKNOWN SUBTOTAL	**47**	**1**	**0**	**0**	**0**	**48**
TOTALS	**3,315**	**513**	**195**	**65**	**20**	**4,108**

NON-CMV OCCUPANTS INVOLVED IN CMV TRAFFIC COLLISIONS TRANSPORTED TO MEDICAL FACILITY

TRANSPORTED TO MEDICAL FACILITY	INJURY TYPE					TOTALS
	NOT INJURED	POSSIBLE INJURY	NON-INCAPACITATING	INCAPACITATING	FATAL	
YES						
Males	23	384	231	123	44	805
Females	32	484	227	102	31	876
Not Specified	0	0	0	2	0	2
YES SUBTOTAL	**55**	**868**	**458**	**227**	**75**	**1,683**
NO						
Males	1,382	55	13	2	4	1,456
Females	885	57	7	1	3	953
Not Specified	48	0	0	0	0	48
NO SUBTOTAL	**2,315**	**112**	**20**	**3**	**7**	**2,457**
UNKNOWN						
Males	4	4	0	0	0	8
Females	0	3	0	0	0	3
Not Specified	40	0	0	0	0	40
UNKNOWN SUBTOTAL	**44**	**7**	**0**	**0**	**0**	**51**
TOTALS	**2,414**	**987**	**478**	**230**	**82**	**4,191**

TRAFFIC COLLISION OCCUPANT PROFILE
INJURIES* BY AGE AND SEX
CMV OCCUPANTS ONLY

SEX	AGE	NOT INJURED	POSSIBLE INJURY	NON-INCAPACI-TATING	INCAPACI-TATING	FATAL	TOTALS
MALE	Under 4	3	1	0	0	0	4
	4-14	64	33	14	3	0	114
	15-24	186	54	13	3	0	256
	25-34	593	61	21	10	4	689
	35-44	791	72	44	18	5	930
	45-54	672	73	40	15	3	803
	55-64	396	29	19	6	5	455
	65-74	92	9	3	3	0	107
	75-80	9	1	1	0	1	12
	85+	1	2	0	0	0	3
	UNKNOWN AGE	16	6	0	0	0	22
	SUBTOTAL	**2,823**	**341**	**155**	**58**	**18**	**3,395**
FEMALE	Under 4	9	0	0	0	0	9
	4-14	56	61	12	1	0	130
	15-24	36	51	11	2	1	101
	25-34	54	13	6	0	0	73
	35-44	80	12	2	3	0	97
	45-54	70	17	1	0	0	88
	55-64	28	7	7	0	0	42
	65-74	7	6	0	1	0	14
	75-84	6	1	0	0	1	8
	85+	2	1	0	0	0	3
	UNKNOWN AGE	5	3	1	0	0	9
	SUBTOTAL	**353**	**172**	**40**	**7**	**2**	**574**
GRAND TOTAL		**3,176**	**513**	**195**	**65**	**20**	**3,969**

* See Definitions for a description of each injury type.

There were 139 occupants whose sex was unspecified. This accounts for the difference in the numbers on this page and the previous page (for CMV occupants).

TRAFFIC COLLISION OCCUPANT PROFILE
INJURIES* BY AGE AND SEX
NON-CMV OCCUPANTS ONLY

SEX	AGE	NOT INJURED	POSSIBLE INJURY	NON-INCAPACI-TATING	INCAPACI-TATING	FATAL	TOTALS
MALE	Under 4	38	16	6	1	0	61
	4-14	90	30	5	5	0	130
	15-24	352	107	65	25	11	560
	25-34	265	90	45	26	8	434
	35-44	212	81	41	19	8	361
	45-54	191	50	25	16	8	290
	55-64	125	29	25	12	4	195
	65-74	77	19	16	10	6	128
	75-84	36	10	10	6	2	64
	85+	4	6	1	0	0	11
	UNKNOWN AGE	19	5	5	5	1	35
	SUBTOTAL	**1,409**	**443**	**244**	**125**	**48**	**2,269**
FEMALE	Under 4	41	15	3	0	1	60
	4-14	61	39	12	4	2	118
	14-24	229	139	57	21	6	452
	25-34	156	91	47	17	7	318
	35-44	143	92	32	17	3	287
	45-54	116	85	34	23	3	261
	55-64	70	48	24	9	3	154
	65-74	55	27	13	9	4	108
	75-84	33	6	8	2	5	54
	85+	3	1	3	0	0	7
	UNKNOWN AGE	10	1	1	1	0	13
	SUBTOTAL	**917**	**544**	**234**	**103**	**34**	**1,832**
GRAND TOTAL		**2,326**	**987**	**478**	**228**	**82**	**4,101**

*See definitions for a description of each injury type.

There were 90 occupants whose sex was unspecified. This accounts for the difference in the numbers on this page and page 53 (non-cmv occupants).

EJECTION STATUS/LOCATION AFTER IMPACT
CMV OCCUPANTS* ONLY

EJECTION STATUS	LOCATION AFTER IMPACT	INJURY TYPE					TOTALS
		NOT INJURED	POSSIBLE INJURY	NON-IN-CAPACITA-TING	IN-CAPACITA-TING	FATAL	
NOT EJECTED	Not Trapped	3,203	492	166	43	5	3,909
	Extricated (Mech Means)	3	7	4	7	6	27
	Freed (Non-Mech)	9	5	19	7	2	42
	Not Applicable	6	3	0	0	0	9
	Unknown	0	0	0	0	1	1
NOT EJECTED TOTAL		**3,221**	**507**	**189**	**57**	**14**	**3,988**
TOTALLY EJECTED	Not Trapped	2	4	3	3	1	13
	Extricated (Mech Means)	0	0	0	0	0	0
	Freed (Non-Mech)	0	0	0	1	0	1
	Not Applicable	0	0	1	0	1	2
	Unknown	0	0	1	0	0	1
TOTALLY EJECTED TOTAL		**2**	**4**	**5**	**4**	**2**	**17**
PARTIALLY EJECTED	Not Trapped	0	0	0	0	0	0
	Extricated (Mech Means)	2	0	0	1	2	5
	Freed (Non-Mech)	0	0	0	0	2	2
PARTIALLY EJECTED TOTAL		**2**	**0**	**0**	**1**	**4**	**7**
NOT APPLICABLE	Not Trapped	8	0	0	0	0	8
	Freed (Non-Mech)	0	0	0	0	0	0
	Not Applicable	14	0	0	0	0	14
NOT APPLICABLE TOTAL		**22**	**0**	**0**	**0**	**0**	**22**
UNKNOWN	Not Trapped	3	1	1	0	0	5
	Unknown	64	0	0	0	0	64
UNKNOWN TOTAL		**67**	**1**	**1**	**0**	**0**	**69**
GRAND TOTAL		**3,314**	**512**	**195**	**62**	**20**	**4,103**

*Includes occupants seated inside the passenger compartment of the vehicle.
Does not include occupants in a trailing unit or riding outside the vehicle.

EJECTION STATUS/LOCATION AFTER IMPACT

NON-CMV OCCUPANTS* ONLY

EJECTION STATUS	LOCATION AFTER IMPACT	INJURY TYPE					TOTALS
		NOT INJURED	POSSIBLE INJURY	NON-IN-CAPACITA-TING	IN-CAPACITA-TING	FATAL	
NOT EJECTED	Not Trapped	2,284	941	418	147	35	3,825
	Extricated (Mech Means)	5	12	24	47	26	114
	Freed (Non-Mech)	2	5	18	11	1	37
	Not Applicable	6	2	2	0	0	10
	Unknown	1	0	0	0	0	1
NOT EJECTED TOTAL		**2,298**	**960**	**462**	**205**	**62**	**3,987**
TOTALLY EJECTED	Not Trapped	1	0	3	9	6	19
	Not Applicable	0	0	0	2	0	2
	Extricated (Mech Means)	0	0	0	0	1	1
	Unknown	0	0	0	0	0	0
TOTALLY EJECTED TOTAL		**1**	**0**	**3**	**11**	**7**	**22**
PARTIALLY EJECTED	Not Trapped	0	0	0	2	0	2
	Extricated (Mech Means)	0	0	1	3	0	4
	Freed (Non-Mech)	0	1	1	0	0	2
PARTIALLY EJECTED TOTAL		**0**	**1**	**2**	**5**	**0**	**8**
NOT APPLICABLE	Not Trapped	7	4	0	0	0	11
	Extricated (Mech Means)	0	0	0	0	0	0
	Freed (Non-Mech)	0	0	0	0	0	0
	Not Applicable	4	5	0	0	0	9
NOT APPLICABLE TOTAL		**11**	**9**	**0**	**0**	**0**	**20**
UNKNOWN	Not Trapped	0	0	0	0	0	0
	Extricated (Mech Means)	0	0	0	0	0	0
	Unknown	37	4	2	0	0	43
UNKNOWN TOTAL		**37**	**4**	**2**	**0**	**0**	**43**
GRAND TOTAL		**2,347**	**974**	**469**	**221**	**69**	**4,080**

*Includes occupants of cars, trucks,and vans seated inside the passenger compartment of vehicle.

INJURY SEVERITY BY OCCUPANT RESTRAINT USAGE
CMV OCCUPANTS* ONLY

RESTRAINT USAGE	INJURY TYPE					TOTALS
	NOT INJURED	POSSIBLE INJURY	NON-IN-CAPACITA-TING	IN-CAPACITA-TING	FATAL	
NO RESTRAINT USED						
None Used	286	186	60	15	9	556
TOTAL - NO RESTRAINT USED	**286**	**186**	**60**	**15**	**9**	**556**
RESTRAINT USED						
Shoulder Belt Only	19	4	2	0	0	25
Lap Belt Only	211	38	11	9	0	269
Shoulder & Lap Belt	2,559	261	115	37	5	2,977
Child Safety Seat	16	2	0	0	0	18
Other	4	8	0	0	0	12
TOTAL - RESTRAINT USED	**2,809**	**313**	**128**	**46**	**5**	**3,301**
UNKNOWN RESTRAINT USAGE	**219**	**13**	**7**	**1**	**6**	**246**
GRAND TOTAL	**3,314**	**512**	**195**	**62**	**20**	**4,103**

*Includes occupants seated inside the passenger compartment of the vehicle. Does not include occupants in a trailing unit or riding outside of vehicle.

INJURY SEVERITY BY OCCUPANT RESTRAINT USAGE

NON-CMV OCCUPANTS* ONLY

RESTRAINT USAGE	INJURY TYPE					TOTALS
	NOT INJURED	POSSIBLE INJURY	NON-IN-CAPACITA-TING	IN-CAPACITA-TING	FATAL	
NO RESTRAINT USED						
None Used	112	100	103	72	32	419
TOTAL - NO RESTRAINT USED	**112**	**100**	**103**	**72**	**32**	**419**
RESTRAINT USED						
Shoulder Belt Only	17	11	1	2	2	33
Lap Belt Only	46	18	9	1	0	74
Shoulder & Lap Belt	1,974	784	343	137	31	3,269
Child Safety Seat	85	35	5	0	1	126
Other	0	0	0	0	0	0
TOTAL - RESTRAINT USED	**2,122**	**848**	**358**	**140**	**34**	**3,502**
UNKNOWN RESTRAINT USAGE	**113**	**26**	**8**	**9**	**3**	**159**
GRAND TOTAL	**2,347**	**974**	**469**	**221**	**69**	**4,080**

*Includes occupants of passenger cars, trucks and vans seated inside the passenger compartment of vehicle.

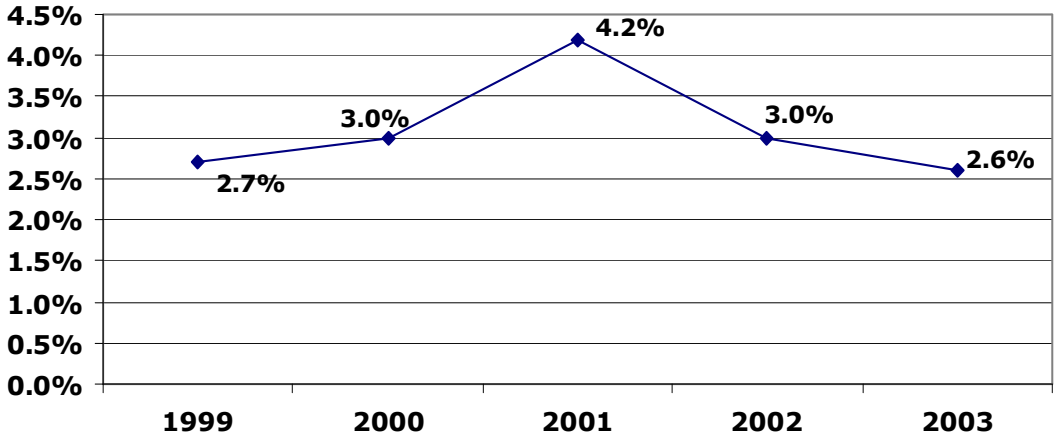
This Suburban hit a slippery spot from a previous rain and fishtailed into the path of a semi truck. The semi hit the left side spinning the Suburban into the other lane in front of another semi, which struck this vehicle on the front corner of the drivers side bending and twisting the entire front end. This vehicle spun and came to a sudden stop along the side of the freeway.

Part V – Hazardous Materials

The movement of hazardous materials in commerce is necessary to maintain economic vitality and meet consumer demands. This shall be conducted in a safe and efficient manner. Hazardous material, by definition, is any substance used in making items that can be potentially dangerous to human beings or the environment.

Taking into account the events of "9/11", it has become even more important to evaluate the risk analysis of hazardous materials. In 2003, there were 89 CMV's with hazard placards involved in collisions; 82 vehicles were carrying hazardous materials when a collision occurred.

PERCENT OF CMV'S WITH HAZARDOUS PLACARDS



HAZARDOUS MATERIAL INVOLVEMENT IN 2003

VEHICLE CARRYING HAZARDOUS MATERIALS	FATAL		INJURY		PDO*		TOTAL UNITS	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
YES	3	3.0%	44	2.8%	35	2.1%	82	2.4%
NO	97	96.0%	1,503	94.4%	1,575	92.9%	3,175	93.7%
UNKNOWN/HIT & RUN	1	1.0%	45	2.8%	85	5.0%	131	3.9%
TOTAL	**101**	**100.0%**	**1,592**	**100.0%**	**1,695**	**100.0%**	**3,388**	**100.0%**

VEHICLE WITH HAZARDOUS MATERIAL PLACARD	FATAL		INJURY		PDO*		TOTAL UNITS	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
YES	5	5.0%	51	3.2%	33	1.9%	89	2.6%
NO	93	92.1%	1,463	91.9%	1,556	91.8%	3,112	91.9%
UNKNOWN/HIT & RUN	3	3.0%	78	4.9%	106	6.3%	187	5.5%
TOTAL	**101**	**100.0%**	**1,592**	**100.0%**	**1,695**	**100.0%**	**3,388**	**100.0%**

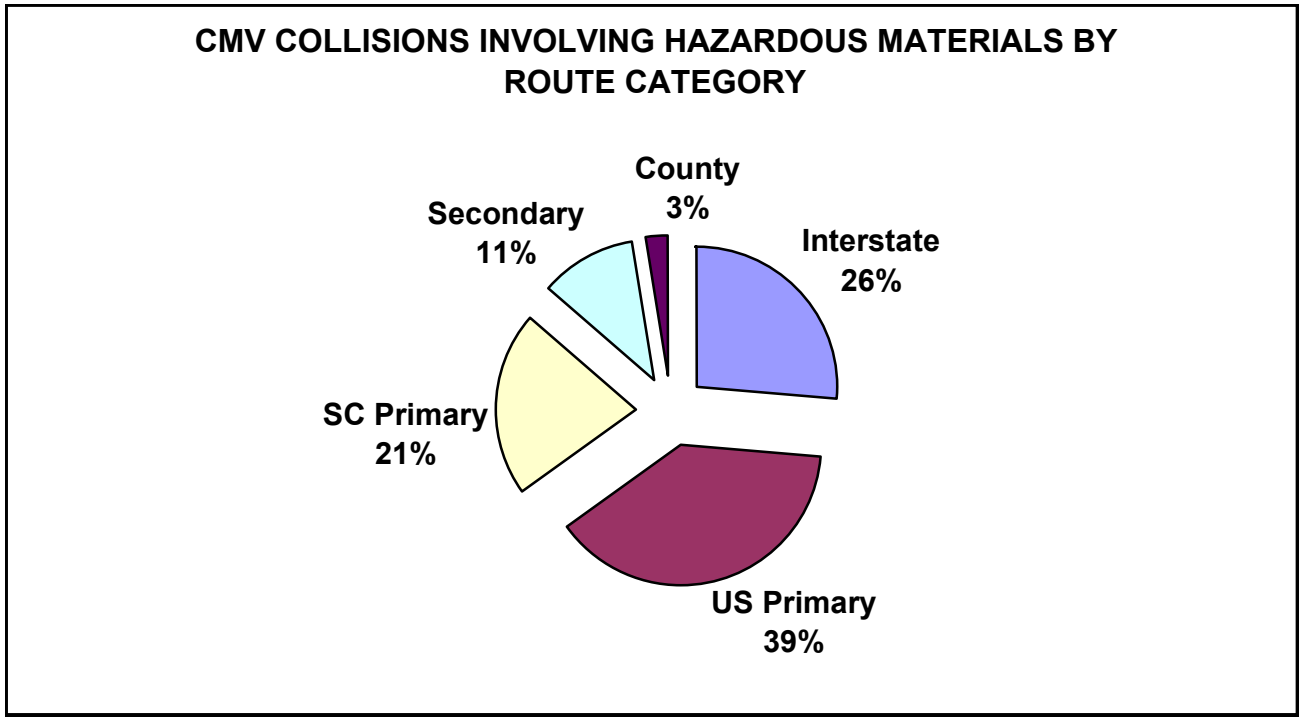
HAZARDOUS MATERIAL RELEASED FROM VEHICLE	FATAL		INJURY		PDO*		TOTAL UNITS	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
YES	3	3.0%	6	0.4%	6	0.4%	15	0.4%
NO	96	95.0%	1,519	95.4%	1,605	94.7%	3,220	95.0%
UNKNOWN/HIT & RUN	2	2.0%	67	4.2%	84	5.0%	153	4.5%
TOTAL	**101**	**100.0%**	**1,592**	**100.0%**	**1,695**	**100.0%**	**3,388**	**100.0%**

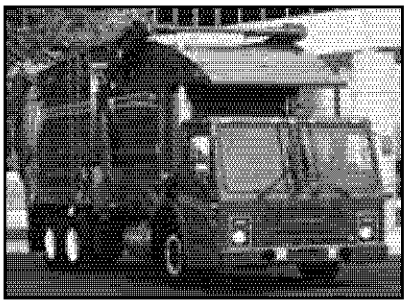
Note: The numbers in the charts above are the number of vehicles (units) involved in CMV collisions.

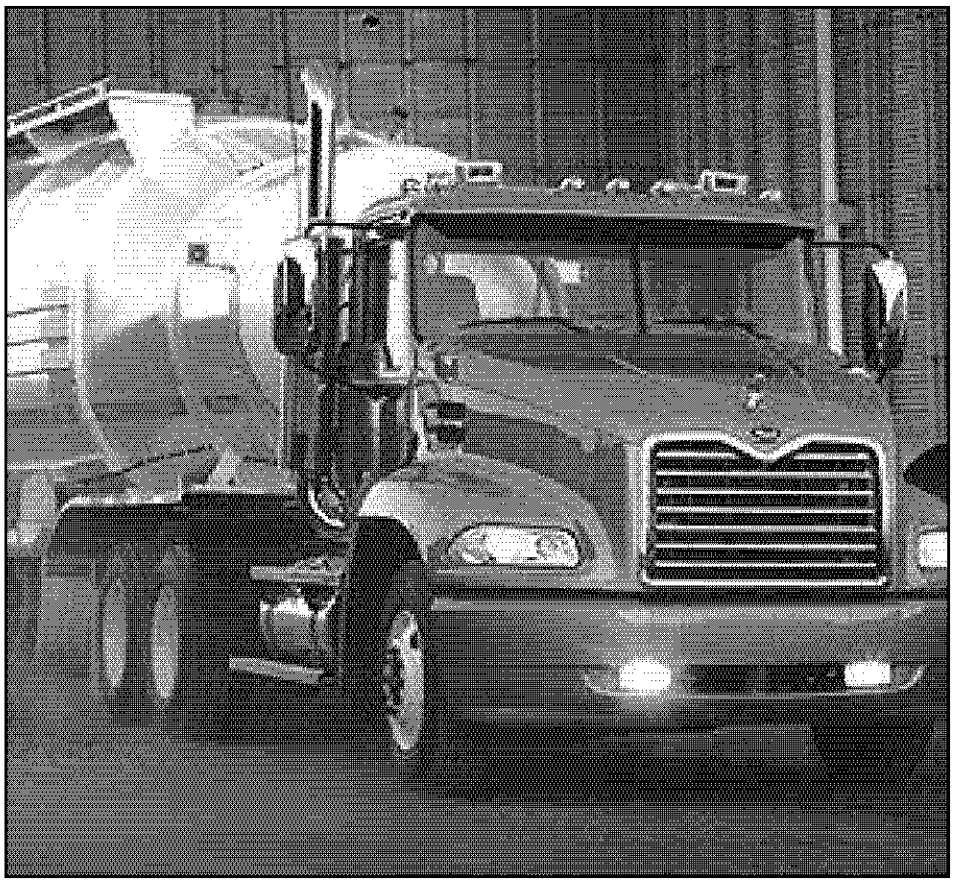
CMV COLLISIONS INVOLVING HARZARDOUS MATERIALS BY ROUTE CATEGORY

ROUTE CATEGORY	CRASHES	% CRASHES	HAZMAT RELEASED	% HAZMAT RELEASED
INTERSTATE	21	26.3%	4	30.8%
US PRIMARY	31	38.8%	2	15.4%
SC PRIMARY	17	21.3%	1	7.7%
SECONDARY	9	11.3%	6	46.2%
COUNTY	2	2.5%	0	0.0%
TOTAL	**80**	**100.0%**	**13**	**100.0%**

39% of CMV collisions involving vehicles carrrying hazardous materials occurred on US Primary roadways. 26% of commercial vehicle collisions involving vehicles carrying hazardous materials occurred on Interstates. However, the highest number of CMV collisions where there was a hazmat release was on SC Secondary roadways (46%). The second highest number of CMV collisions where there was a hazmat release occurred on Interstates. Almost 1/3 of collisions where there was a hazmat release occurred on Interstates (31%).







APPENDIX

AUTOCARRIER TRAILER

CARGO TANK

CONCRETE MIXER

DUMP TRAILER

GARBAGE TRUCK

LOG (POLE) TRAILER

D.P.S. USE ONLY | Page # / Of: | **SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)** | # Of Units | Amended - Attach Copy of Original Report | Corrected | Notified | Arrived

Date | Time | County | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | On | Collision Location (Rt. # / Name) | 0-Main 6- 2-Alternate 7-Business 5-Spur | Miles | Dir. N E S W | In / Near City or Town of:

Lane # / Dir. # | Of | N E S W | Distance Offset Miles Feet | Direction N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | From | Base Intersection (Rt. # / Name) | 0-Main 6- 2-Alternate 7-Business 5-Spur 9-Other | ASRU code | MP/Grid

R.R. Id. | From N E S W | Ramp Only 1- Entrance 2- Exit | To N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Toward | Second Intersection (Rt. # / Name) | 0-Main 6- 2-Alternate 7-Business 5-Spur 9-Other | Latitude o ' " | Longitude o ' "

K- 624151 | Driver/Pedestrian's Full Name

Unit # | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company:

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

K- 624152 | Driver/Pedestrian's Full Name

Unit # | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company:

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

K- 624153 | Driver/Pedestrian's Full Name

Unit # | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company:

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

North

Unit 1 Dam. $ | Unit 2 Dam. $ | Unit 3 Dam. $ | Prop.Dam. 1 $ | Prop. Dam. 2 $

Property Owner/Witness: | Address | State | Zip: | Phone

Property Owner/Witness: | Address | State | Zip: | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION. BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name | Rank | Badge # | Code | Date | Reviewer's Name | Rank | Internal Agency Code

Unit:	Date of Birth	Sex:	Race	INJ:	Seat:	R/SD	A.B.D.	Eject	LAI:	Tran:	Name	Street Address	Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch

a): 1-Deployed Fror; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.

b): 1- Switch in On Positior; 2- Switch in Off Positior; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3-Tot. Ejected; 7- Not App.; 9- Unk.

b) Motorcycle Only

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 41- Protective Pads; 51-Reflective Clothing; 61-Lighting

Sequence of Events

Mail Orig. TR-310 to: Office of Financial Responsibility, PO Box 1498, Columbia, SC 29216

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 38- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50-Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 68- Other; 69- Unk.

Event 1	Event 2	Event 3	Event 4	Most Hrmfl	1st Hrmfl
1	1	1	1	1	
2	2	2	2	2	
3	3	3	3	3	

11- Separation of Units; 12- Spill (Two-Wheeled Veh.); 18- Other Noncollision; 19- Unk. Non-collision

Manner of Collision (Struck Veh.): 1st Hrmfl Collision

00- Not Coll. w/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↘ | ↙); 42- Angle (→ | ←); 43- Angle (↗ | ↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed 1 2 3 — **Most Deformed** 1 2 3

21- Pedestrian; 81- None; 92- Rollover; 93- Total; 94-Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/ Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Extent of Deformity: 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Alc Test Results: A1- ; A2- ; A3-

Trafficway: 1- Two -way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing lanes; 03- Entering traffic lane; 04- Leaving traffic lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/passing; 08- Parked; 09- Slowing or Stopped in traffic; 10- Turning left; 11- Turning right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

A: 1- Gore; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.

B: X-walk: 1- Y 2- N 9- U

1st Harmful Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

School Bus Involved: 1- Yes 2- No

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Tr; 08- T-Intersection; 09- Traffic Circle; 12- Y - Intersection; 13- Nonjunction; 99- Unk.

1- Before 1st Sign; 2- Advanced Warning Area; 3-Transition Area; 4- Activity Area; 5-Termination Area

----------Work Zone Location

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

----------Work Zone Type

Workers Present: 1- Yes 2- No

Contributing Factors

Primary

Others:

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (I.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (I.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non- Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk; 66-Under Infl.; 67- Other Person Under Infl

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

D.P.S. USE ONLY

South Carolina
Uniform Traffic Collision Report
(For Investigating Officers)
Supplemental Bus & Truck Accident Report

Amended-Attach Copy of Original Report | Corrected

Page _____ of _____ Pages

Date	Time	County	Route Category	Accident Location (Route Number and Name if Any)	Auxillary
			1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary 6-Other	ON	0-Mainline 6-Connection 2-Alternate 7-Business 5-Spur 9-Other

SCREENING INFORMATION

NUMBER OF QUALIFYING VEHICLES INVOLVED

A Truck having a GVWR of 10,001 lbs. or more for the power unit →

OR

A Vehicle with a Hazardous Materials Placard →

OR

A Bus that is Designed or Used to Carry 16 or More Persons, Inlcuding Driver →

OR

A Motor Vehicle Engaged in Interstate Commerce that is Designed or Used to Carry 9-15 Persons, Inlcuding the Driver, for Compensation →

Number of Persons Involved:

Sustaining Fatal Injuries →

Transported for Immediate Medical Services →

Number of Vehicles Towed

Towed from the Scene Due to Damage →

Do Not Complete This Form Unless:

One or More Qualifying Vehicles was Involved - AND

One or More Qualifying Injuries was Sustained - OR

One or More Vehicles (not necessarily the truck or bus) was Towed from the Scene

Total Number of Supplemental Forms Required for this Collision :

Unit Number_____ **FR-10 Number** _____

Carrier Information

Name: _____

Address: _____

City: _____ **State:** **Zip:**

Business Phone Number:

Identification Numbers

U.S. DOT None = 0

ICC MC **State:**

State Number

Is this vehicle an (1) Interstate or a (2) Intrastate carrier?

Was a Citation Issued to this Vehicle? 1- Yes 2- No 3- Pending

Access Control

1- No Access Control
2- Full Acces Contro
3- Partial Access Control

Vehicle Information

Gross Vehicle Weight Rating

Weight Rating of the Power Unit of the Truck

01- Less than or Equal to 10,000 Pounds
02- 10,001-26,000 Pounds
03- More than 26,000 Pounds
99- Unknown/ Hit and Run

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard
01- Light Truck (only w/ HAZMAT placard
02- Bus (seats for 9-15 people)
03- Bus (seats for 16 + people
04- Single Unit Truck (2axles/6+ tires
05- Single Unit Truck (3 or more axles
06- Truck w/ Trailer
07- Truck-Tractor Only (Bobtail)
08- Tractor w/ Semi-Trailer
09- Tractor w/ Double Trailers
10- Tractor w/ Triple Trailers
98- Other/Unable to Classify
99- Unknown/ Hit and Run

Cargo Body Type

00- Bus (seats for 9-15 people)
01- Bus (seats for 16+ people)
02- Enclosed Box
03- Cargo Tank
04- Flat Bed
05- Dump
06- Concrete Mixer
07- Auto Transport
08- Garbage/Refuse
09- Grain, Chips, Grave
10- Pole
11- Intermodal Container
97- Not Applicable
98- Other
99- Unknown/ Hit and Run

Trailer Length and Width

Length

00- No Trailer
01- Less than 480 in. (40 ft)
02- 481 in. - 576 in (48 ft.)
03- 577 in. or more
99- Unknown/ Hit and Run

Trailer 1 Length | Trailer 2 Length

Width

00- No Trailer
01- Less than 60 in. (5 ft.)
02- 61 in. - 84 in. (7 ft.)
03- 85 in. or more
99- Unknown/ Hit and Run

Trailer 1 Width | Trailer 2 Width

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials?

1- Yes 2- No 3- Unknown/Hit and Run

Did the Vehicle Have a Hazardous Material Placard?

1-Yes 2- No 3- Unknown/Hit and Run

If "Yes", What Class of Hazardous Material (off placard/shipping papers)?

01- Class 1 (Explosives)
02- Class 2 (Gases)
03- Class 3 (Flammable Liquids)
04- Class 4 (Flammable Solids)
05- Class 5 (Oxidizing Substance)
06- Class 6 (Poison/Infectious Substance)
07- Class 7 (Radioactive)
08- Class 8 (Corrosives)
09- Class 9 (Misc. Goods)
10- No Placard
99- Other/Unknown/Hit and Run

If "YES", enter 4 digit HAZMAT ID(look on placard/shipping papers)

Did Hazardous Material Release from this Vehicle?

1-Yes 2- No 3- Unknown/Hit and Run

Notification of Release:

Investigator's Name	Rank	Date	Reviewer's Name	Date

ACKNOWLEDGEMENTS

The Office of Highway Safety and The State Transport Police of the South Carolina Department of Public Safety would like to take the opportunity to express our sincere appreciation to all persons (with special thanks to the ITO personnel of SCDPS), agencies, departments and organizations that have contributed to this publication.

The vast majority of data used to produce this publication was tabulated from the Uniform Traffic Collision Report and the Supplemental Bus and Truck Accident Report for Investigating Officers. Members of the South Carolina Highway Patrol, State Transport Police, County Sheriff Departments, City Police Departments and various other Law Enforcement Agencies submitted these reports.

Special recognition is given to the above traffic investigative agencies, and in doing so, we cannot forget the support and cooperation of other agencies and organizations that helped make this information available.

The Office of Highway Safety, which tabulated the traffic collision data and other pertinent information for this publication, could not have done so without the untiring efforts of the above persons and organizations.

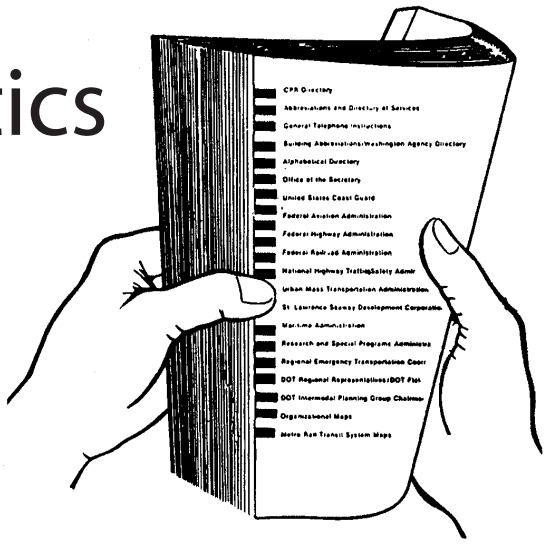
Printing Cost

Total Copies Printed……...……..…100
Cost per Copy…..……. $24.98

Total Cost……..……$2,498.20

How to Use This Index

Place left thumb on the outer edge of this page. To locate the desired entry, fold back this remaining page edges and align the index edge mark with the appropriate page edge mark.



DEPARTMENT OF PUBLIC SAFETY
SC
1993
BIENE PUBLICO SERVIRE

FMCSA
Federal Motor Carrier Safety Administration

Developed in cooperation with the
South Carolina Division - FMCSA